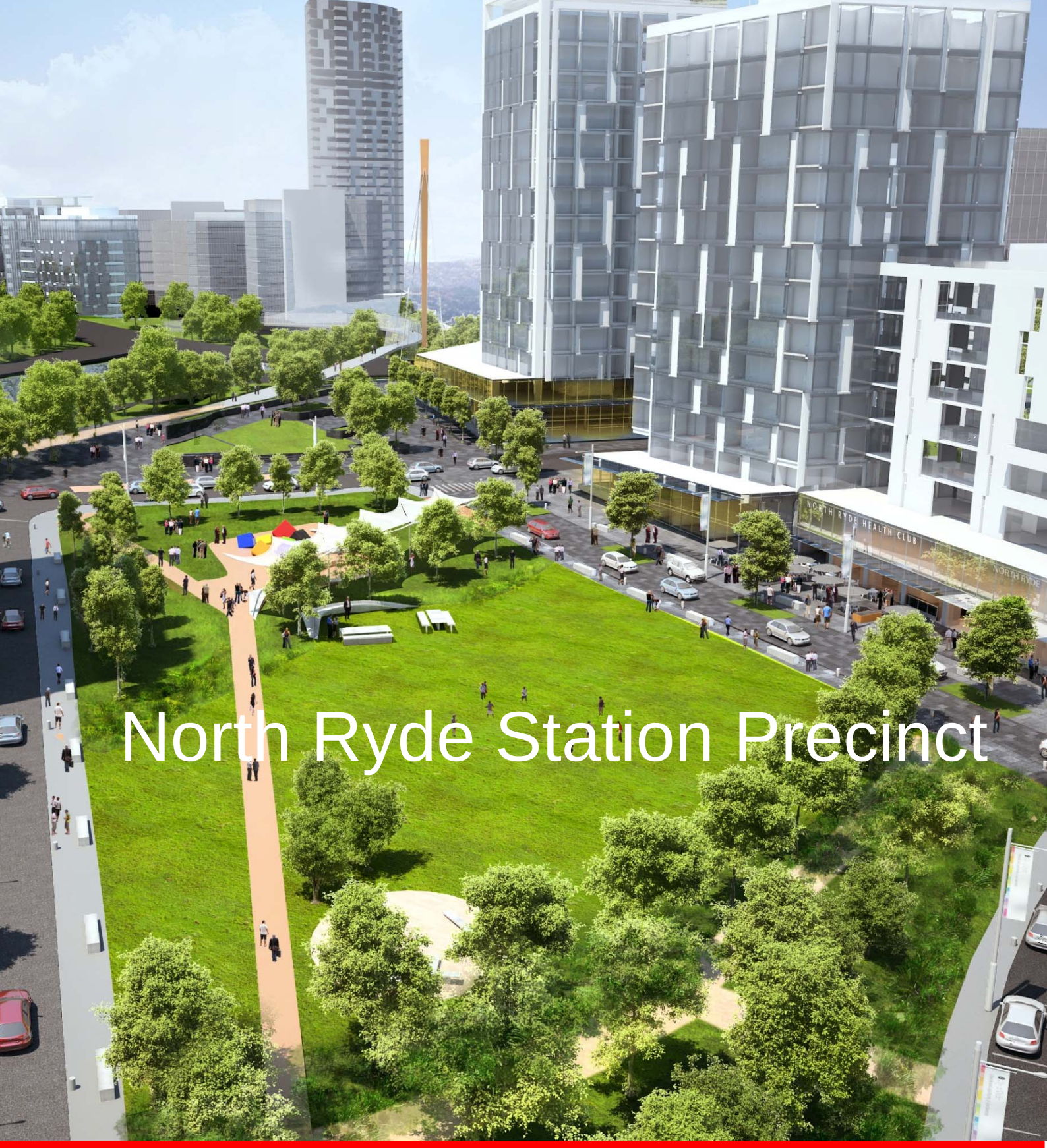


# North Ryde Station Precinct

Development Control Plan

# Contents

# Figures



# Tables



| Amend. No. | Date approved | Effective date | Subject of amendment |
|---|---|---|---|
| **1** | **08/12/2015** | **13/01/2016** | **Amends car parking rates for residential development** |

# 1.0

# Introduction

## 1.1 Introduction

This Development Control Plan (DCP) provides a framework to guide future development in the North Ryde Station Precinct (the Precinct). The document specifies built form and other controls for all development within the Precinct to achieve the vision for the Precinct as a vibrant community and as a place to live, work and visit.

## 1.2 Name and Application of this Plan

This plan is called the North Ryde Station Precinct Development Control Plan 2013. It has been prepared pursuant to the provisions of Section 74C of the *Environmental Planning and Assessment Act 1979* (the Act). This plan was approved by the Director-General of the Department of Planning and Infrastructure on 20 November 2013 and came into force on 4 December 2013.

## 1.3 Land to which this Plan applies

This plan applies to all land within the North Ryde Station Precinct as identified at Figure 1.

## 1.4 Purpose of this Plan

The purpose of this plan is to:

- Communicate the planning, design and environmental objectives and guidelines against which the consent authority will assess future development applications;
- Ensure the orderly, efficient and environmentally sensitive development of the Precinct as envisaged by the Ryde Local Environmental Plan 2010;
- Promote high quality urban design outcomes;
- Provide more detailed planning and design controls for important components of the Precinct; and
- Integrate the Precinct with the urban structure and connections to and within the wider Macquarie Park Corridor, in addition to reflecting the controls contained within the Ryde DCP 2010.


**Figure 1** Land to which Plan applies

## 1.5 Relationship to other Plans and Policies

### 1.5.1 Plans and Policies

Ryde Local Environmental Plan 2010 and relevant State Environmental Planning Policies must be taken into account when making a development application. In the event that Ryde Local Environmental Plan 2010 is superseded, development within the Precinct will need to have regard to any subsequently made local environmental plan that applies to the site.

This DCP supplements the Ryde Local Environmental Plan 2010 by providing additional objectives, controls and guidance to applicants proposing to undertake development in the Precinct, and for Council in the assessment of development applications.

Development within the Precinct will need to comply with this plan as well as relevant provisions in the Ryde DCP 2010 identified in Table 1. In the event that Ryde DCP 2010 is superseded, development within the Precinct will need to comply with the corresponding provisions in any new comprehensive DCP.

A number of policies, design standards and guidelines also apply to the Precinct, such as the Council's Street Tree Master Plan. The application of relevant policies is referenced in this plan, and set out in Table 2. In the event the referenced policies are superseded, development within the Precinct will need to have regard to any updated versions.

In the event of any inconsistency between this plan and any other DCP, or policy listed in Table 2, this plan will prevail to the extent of the inconsistency.

**Table 1** Relevant Provisions of the Ryde DCP 2010

| Provision | Section of Ryde DCP 2010 |
|---|---|
| Lodging a Development Application | 1.9 |
| Notification of Development Applications | 2.1 |
| Brothels [Sex Services Premises] | 3.1 |
| Child Care Centres | 3.2 |
| Macquarie Park Corridor | 4.5 |
| Energy Smart, Water Wise | 7.1 |
| Waste Minimisation and Management | 7.2 |
| Construction Activities | 8.1 |
| Stormwater Management | 8.2 |
| Driveways | 8.3 |
| Title Encumbrances | 8.4 |
| Fencing | 9.4 |
| Installation of Satellite Dishes and MDS - Microwave Antenna | 9.5 |
| Tree Preservation | 9.6 |

**Table 2** Other Policies applying to Development in the Precinct

| Policy | Author | Date |
|---|---|---|
| City of Ryde Street Tree Master Plan | City of Ryde | April 2013 |
| Macquarie Park Public Domain Technical Manual | City of Ryde | 2008 |
| National Disability Strategy NSW Implementation Plan | NSW Department of Family and Community Services | 2012 |
| NSW Disability Action Plan 2012-2017 | Transport for NSW | 2012 |
| Development near Rail Corridors and Busy Roads Interim Guideline | NSW Department of Planning | 2008 |
| Ryde Bicycle Strategy and Master Plan | City of Ryde | 2007 |
| Residential Flat Design Code | NSW Department of Planning, Natural Resources and Infrastructure | 2002 |

### 1.5.2 Interpretation

Meanings in this DCP have the same meanings as defined in the Ryde Local Environmental Plan 2010. Reference should otherwise be made to definitions under the Act and the *Environmental Planning and Assessment Regulation 2000*. Where not otherwise defined, the meaning is to be taken as the meaning most commonly understood.

### 1.5.3 Planning Documents

Applicants proposing to undertake development in the Precinct, and Council when assessing development applications, should refer to:

- relevant State Environmental Planning Policies;
- the current Ryde LEP 2010 (and any subsequent relevant LEP);
- this DCP;
- the existing Ryde DCP 2010 provisions in Table 1 (and any subsequent relevant DCP);
- the relevant Section 94 Contributions Plan;
- technical studies completed as part of the precinct planning work (available on the NSW Department of Planning and Infrastructure website www.planning.nsw.gov.au); and
- the policies set out in Table 2.

## 1.6 Consent Authority

Unless otherwise authorised by the Act, City of Ryde Council is the consent authority for all development in the Precinct to which this plan applies on land that is within Ryde Local Government Area.

Council will use this plan when assessing development applications.

## 1.7 Variations to Development Controls and Plan Amendments

### 1.7.1 Compliance with Objectives and Controls in this Plan

Clauses in this plan contain **Objectives** and **Controls** relating to various aspects of development (for example, building setbacks, requirements for car parking, or minimum requirements for landscaping).

The Objectives enable Council and applicants to consider whether a particular proposal will achieve the development outcomes established for the Precinct.

The Controls establish standards, which if met, mean that development should be consistent with the Objectives. However, in some circumstances, strict compliance with the controls may not be necessary, or may be difficult to achieve because of the particular characteristics of a development site. In these situations, Council may grant consent to a proposal that does not comply with the Controls in this plan, providing the intent (i.e. the Objective/s) of the Controls is achieved.

### 1.7.2 Compliance with the Indicative Layout Plan

The Indicative Layout Plan, as shown in Figure 3, shows one option as to how the overall Precinct may develop over time. It is intended as a guide to demonstrate how the objectives for the site may be achieved.

However, it is recognised that there may be other options for the site's layout which may be more efficient and effective in achieving the vision for the Precinct. As such, Council may grant consent to a proposal that differs from the Indicative Layout Plan where the variation is considered to still achieve the objectives set out in the Ryde Local Environmental Plan 2010 and the Vision in Chapter 2 of this plan.

## 1.8 Monitoring and Review

The Director-General of the Department of Planning and Infrastructure will keep this plan under regular and periodic review. The Director-General will review the plan to:

a. assess the continued relevance and responsiveness of the plan's provisions as well as the achievement of the plan's objectives;

b. identify the need for changes to the provisions to better achieve the objectives of the plan and changes in circumstances; and

c. ensure the availability of adequate development capacity under the plan's provisions.

## 1.9 Information to be submitted with Development Applications

Information requirements for development applications are set out in Part 1.9 of the Ryde DCP 2010.

## 1.10 Notification of Development Applications

Notification of development applications will be undertaken in accordance with Part 2.1 of the Ryde DCP 2010.

# 2.0

# Vision for North Ryde Station Precinct

## 2.1 Vision for North Ryde Station Precinct

The vision for the Precinct is for a "Transit Oriented Development" which has direct access to North Ryde Station on the Epping to Chatswood Rail Link, and which is connected, accessible, permeable and has a high base population density. The Precinct's development will encourage greater activity around the railway station through the inclusion of suitable land uses to encourage greater use of the public transport network.

The vision for the Precinct also seeks to:

- Maximise public transport patronage through the appropriate placement of compatible land uses and improvements in accessibility and connectivity through the Precinct and to North Ryde Station.
- Represent 'place making' through activation of the space, creation of a destination and creation of identifiable landmarks, including an appropriate mix of uses and community facilities.
- Create communities that are well connected to employment areas via public transport, pedestrian and bicycle links.
- Create integrated open space and public domain spaces encouraging their use and activation by key buildings.
- Create liveability through innovation, leading edge design and sustainability.
- Provide a logical extension of urban areas for employment, residential, retail and commercial land uses.

The proposal is consistent with key principles for Transit Oriented Development in that it:

- Provides mixed use development within 800 metres of North Ryde Station which provides a rapid and frequent transit service.
- Provides increased residential density around North Ryde Station, supported by appropriate community facilities.
- Integrates North Ryde Station with retail, commercial, recreational and community uses, therefore stimulating activity around the station.
- Applies reduced rates of private car parking while ensuring pedestrian and bicycle connectivity to North Ryde Station and nearby employment.
- Provides liveable and active public domain spaces for the community that integrate with proposed land uses and North Ryde Station.
- Provides the opportunity to rehabilitate the riparian corridor to the north of the high density residential precinct.
- Provides high quality open space within walking distance of all areas in the Precinct.

**Elevated view across central open space**

## 2.2 Design Principles

The following design principles should guide development of the Precinct:

- **North Ryde Station Precinct is a Next Generation project** - the project will be developed over a 10-15 year period - embodying new ideas and new ways of living and working.
- **North Ryde Station Precinct is Accessible** - recognise that the site is very accessible, with all that Sydney has to offer within easy reach.
- **North Ryde Station Precinct is Legible** - the project will be the new landmark at the southern end of the Macquarie Park Corridor and should be a gateway and point of orientation.
- **North Ryde Station Precinct is a Community** - the Precinct will offer the services and support that makes it a complete and desirable community.
- **North Ryde Station Precinct is Active** - many of the new community's needs will be available on site. The Precinct is also to be a destination that can serve the wider community.
- **North Ryde Station Precinct is a Bushland Place** - the Precinct will enhance, extend and connect the surrounding bushland into and through the site.

- **North Ryde Station Precinct is a Recognisable Place** - at the heart of the project, there should be a unique and memorable space that is a destination within the site and for the surrounding district.
- **North Ryde Station Precinct is Responsive** - the Precinct will work with the site to integrate topography, water, landscape and built form and to create connections into Macquarie Park and the surrounding bushland.

**View from Delhi Road looking west**

# 3.0

## Urban Structure

## 3.1 Urban Structure

### 3.1.1 Regional Context

The Precinct is strategically located at the intersection of two of Sydney's main transport corridors - the northwest M2 Motorway and the north-south Ring Road 3 corridor – as well as major public transport links, most notably the Epping to Chatswood Rail Line and future North West Rail Link. The site also lies at the intersection of the Global Economic Corridor and the Warringah Sutherland Corridor.

Figure 2 shows the Precinct in its regional context.

The urban structure for the Precinct aims to ensure the site is integrated with other land uses within the Macquarie Park Corridor. The Precinct forms one end of a spine that generates links in both directions between the Macquarie Park Business Park and Macquarie University.

The Precinct is also within walking distance of the Lane Cove National Park which is a major open space asset. The potential exists to provide better links between the residential areas of North Ryde and the Lane Cove National Park.

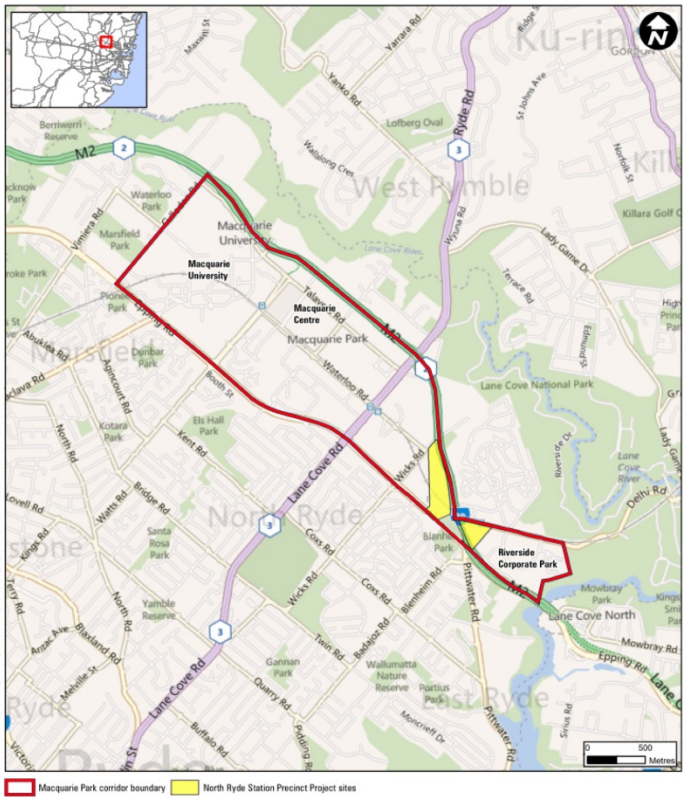


**Figure 2** Regional Context

### 3.1.2 Indicative Layout Plan

The indicative layout for the Precinct is shown in Figure 3. The indicative layout has been developed to achieve the target yields necessary to support the site's development as a Transit Oriented Development while maximising resident and user amenity. It proposes the creation of three distinct neighbourhoods:

- Station precinct
- Mixed use precinct
- High density residential precinct

**Objectives**

a. Ensure that development in the Precinct occurs in a coordinated manner consistent with the vision for the site.

b. Ensure that the site is developed in accordance with the following principles:

   i. A north-south spine road which will link the northern precincts (mixed use precinct and high density residential precinct) with Wicks Road and Epping Road.

   ii. Employment uses within 500 metres of the station and residential uses within 800 metres of the station.

   iii. Distribution of open space off the major circulation spine(s).

   iv. Road areas minimised and open space optimised to create highest area possible for development parcels.

   v. Development parcels oriented for good solar access, with parks and potential retail spaces oriented towards the afternoon sun.

   vi. Streets defined through appropriate and visually appealing built form.

   vii. Towers located generally off-axis to minimise visual impact.

   viii. Open space and north facing frontages maximised.

   ix. Streets generally ending in open space or green views.

   x. Other than in the station precinct, taller buildings located away from Epping Road and along the M2 Motorway to reduce the appearance of building bulk.

   xi. Heights are managed to create transitions to surrounding land uses.

   xii. Pedestrian and cycle connections are maximised through and around the Precinct, connecting to public transport and other major facilities.

   xiii. Future connections are accommodated to ensure the site is integrated with surrounding areas.

c. Allow for flexibility in the implementation and design of the site whilst ensuring achievement of key outcomes and vision for the precinct.

**Control**

1. All development applications are to be generally in accordance with the Indicative Layout Plan. However, the Indicative Layout Plan is preliminary only and shows one option for development of the Precinct. An alternative layout can be considered.

*Note: Future development applications that create the local road network and development lots for the Precinct will need to confirm how floor space will be distributed across each development lot consistent with the floor space ratio controls identified in the Ryde Local Environmental Plan 2010 (or subsequent relevant LEP). This allocation is to ensure that the built form outcomes for the site are achieved.*

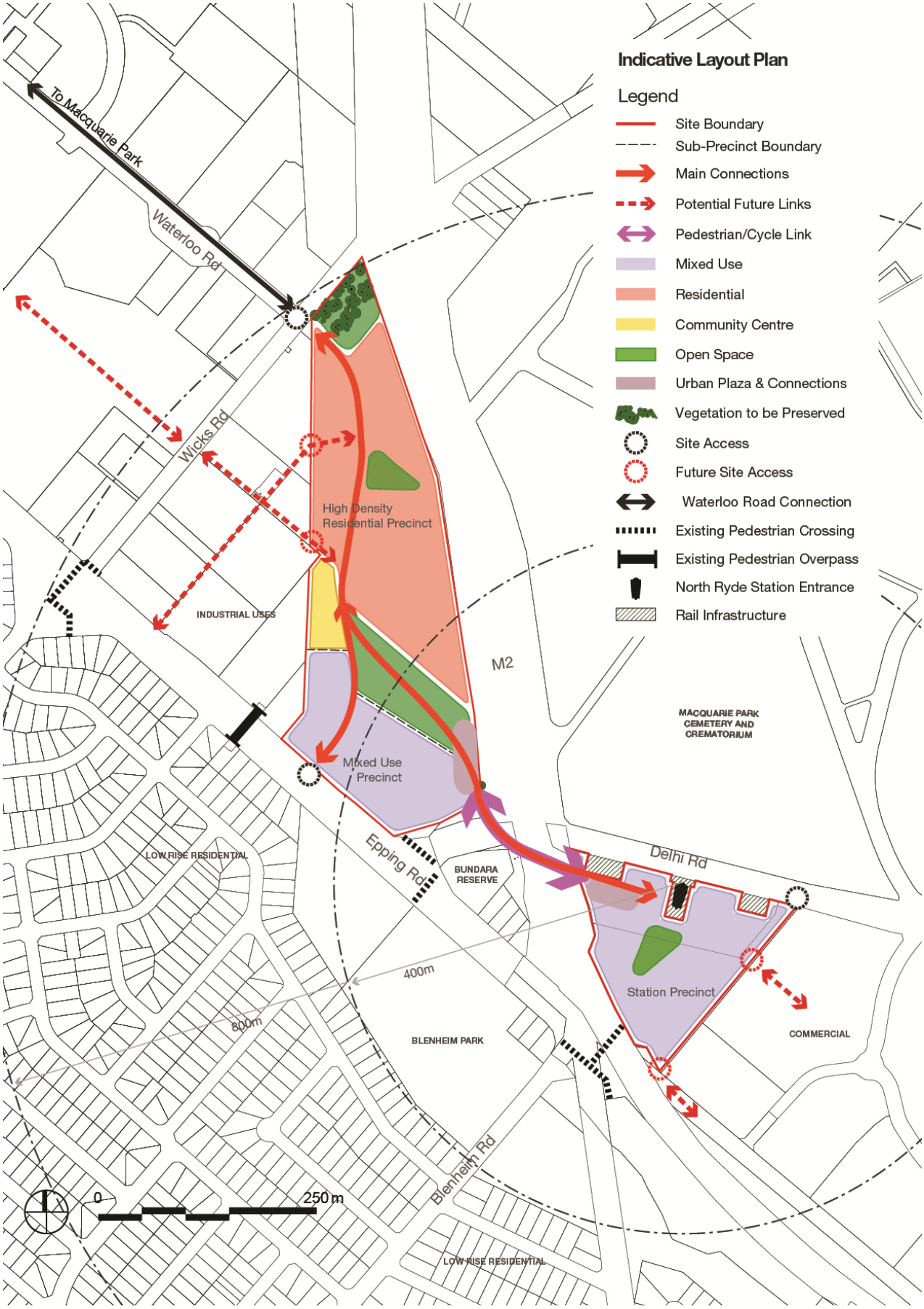


**Figure 3** Indicative Layout Plan

## 3.2 Circulation Networks

**Objectives**

a. Restrict car parking to minimise traffic congestion and adverse impacts on the public domain and maximise use of the existing rail infrastructure.

b. Provide a street network that responds to the topography as well as the existing street network and development pattern.

c. Maximise the legibility of the street layout by establishing a clear hierarchy of streets, protecting and creating view corridors, and adopting other way-finding elements.

d. Provide for safe, clear and legible pedestrian, cycle and vehicular movements within the site and to surrounding areas.

e. Consider and accommodate future connection options to ensure the Precinct is integrated with surrounding areas.

**Controls**

1. Development applications for subdivision are to be generally in accordance with the Indicative Vehicular Movement Plan at Figure 4.
2. Provide a clear hierarchy of streets, including a spine road to link Epping Road and Wicks Road.
3. Provide emergency access to the M2 Motorway.
4. A signalised intersection is to be provided at Wicks Road/Waterloo Road.
5. Any proposed variations to the Indicative Vehicular Movement Plan must demonstrate that:
    a. the proposed changes meet the Objectives for this section;
    b. adequate connections are provided to key areas surrounding the site, including Macquarie Park and Riverside Corporate Park; and
    c. emergency access is provided.

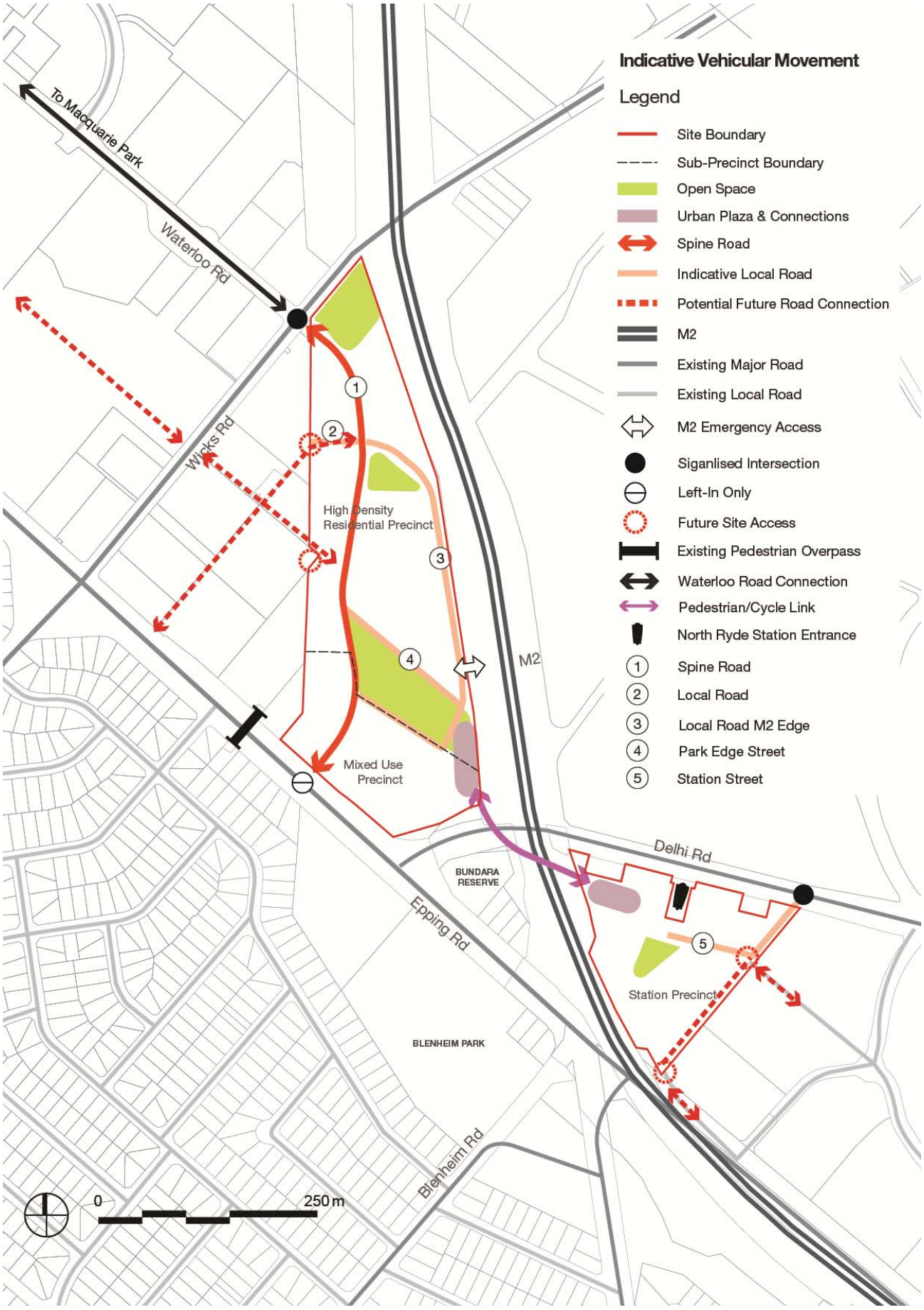


**Figure 4** Indicative Vehicular Movement

## 3.3 Public Transport

**Objectives**

a. Reduce reliance on private vehicles.

b. Maximise use of public transport by future residents and workers, particularly of North Ryde Station and Epping Road bus services.

c. Improve facilities for bus users.

d. Facilitate easy and safe pedestrian and cycle access to public transport facilities.

**Controls**

1. A Public Transport Facilities Plan is to be prepared for the Precinct identifying the location, design, timing, funding and responsibilities for delivery of key public transport facilities within the Precinct.
2. The key public transport facilities are:
    a. passenger set-down/pick up and cycle parking at the North Ryde railway station;
    b. new bus shelter and facilities at Epping Road inbound stop between Wicks and Delhi Roads;
    c. new bus facilities at Epping Road outbound stop at Delhi Road;
    d. relocation of bus stop and facilities at Delhi Road eastbound stop at Road 38;
    e. completion of the Macquarie University to Macquarie Park North Ryde active transport spine; and
    f. Waterloo Road (northern side) shared pedestrian and cycle path.
3. Two separate Public Transport Facilities Plans may be lodged for the Precinct, being for:
    a. the station precinct; and
    b. the high density residential and mixed use precincts combined.
4. The Public Transport Facilities Plan(s) is/are to address the objectives and controls of this section and if two separate plans are prepared each is to identify any shared public transport facilities, as relevant.
5. The Public Transport Facilities Plan(s) is/are to be lodged with the first development application for residential/commercial development and approved prior to first occupation by residents/workers.

## 3.4 Open Space

**Objectives**

a. Create an open space and public domain network through the site that provides for high quality amenity for future residents and workers and accommodates a range of active and passive recreational uses.

b. Help delineate distinct neighbourhoods through the use of open space.

c. Ensure that buildings are designed to help activate and define open spaces.

d. Encourage active retail uses (primarily food and beverage retail) around plazas and the station entry.

e. Contribute to ecological biodiversity and habitat by planting endemic species and consolidating vegetation corridors, including those connecting to Lane Cove National Park.

f. Accommodate overland flow requirements and improve stormwater quality.

g. Facilitate ease of circulation within public domain areas.

h. Maximise access to public open space, and contribute to the pedestrian and cycle network.

**Controls**

1. Open spaces, including parks and plazas, are to be provided in accordance with the Indicative Open Space Typologies Plan at Figure 5 and with the requirements set out in Table 3.
2. Open spaces should be designed to maximise solar access but also to provide for shade.
3. Play areas are to provide for good natural surveillance and be safe.
4. Parks and plazas are to be designed in accordance with the Macquarie Park Public Domain Technical Manual.
5. Trees will be predominantly indigenous with some specimen exotic trees. Tree selection and planting should be undertaken in accordance with the City of Ryde Street Tree Master Plan.
6. Any proposed variations to the Indicative Open Space Typologies Plan at Figure 5 must demonstrate that:
    a. the proposed changes meet the Objectives for this section;
    b. a minimum of three open spaces are provided within the high density residential precinct and mixed use precinct organised off the main north-south spine road; and
    c. at least 50% of new public space is to receive 3 hours of sunlight on June 21 between 9am and 3pm.

*Note: Overshadowing controls for open space are provided in Section 5.7 of this DCP.*

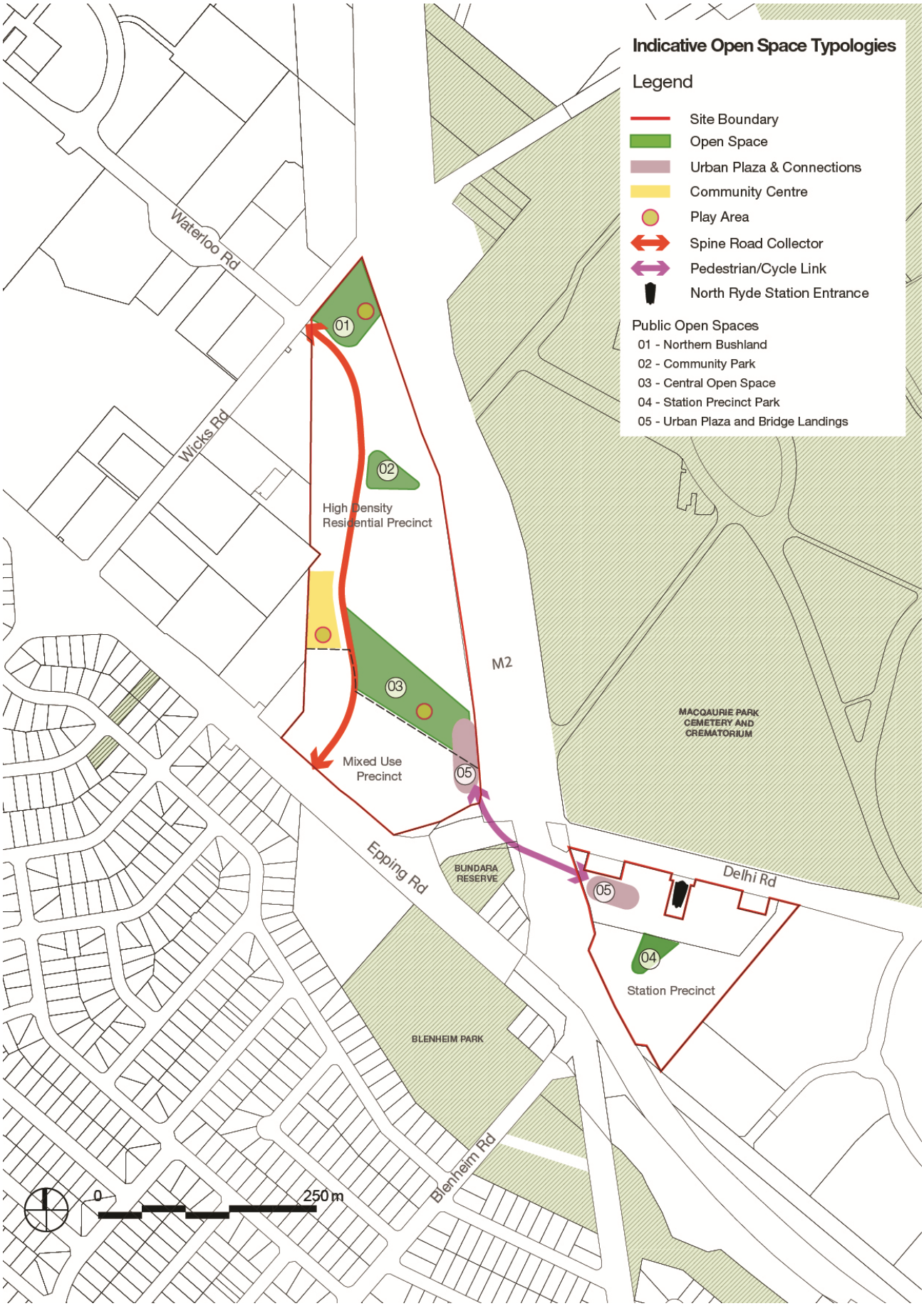


**Figure 5** Indicative Open Space Typologies

**Table 3** Requirements for Parks and Plazas

| Park/Plaza | Minimum Area | Requirements |
|---|---|---|
| **Parks** | | |
| Northern Bushland Park | 4,000 sqm | Provision is to be made for:<br>• Natural landscape of restored bushland for passive recreation<br>• Pedestrian connection to Wicks Road<br>• Mass planting around edge to act as buffer to surrounding roads<br>• May be publicly or privately owned but access to general public must be provided at all times<br>Consider opportunities for linkages to Lane Cove National Park |
| Community Park | 2,000 sqm | Provision is to be made for:<br>• Passive recreation and may include a retail dining area |
| Central Open Space | 6,300 sqm | Provision is to be made for:<br>• Informal active play and ball games, including children's playground<br>• Interface with the retail and commercial buildings to the south<br>• BBQ and picnic facilities<br>• Outdoor gym circuit<br>• Bike parking on urban edge<br>• A raised surface on the adjacent road to the south to create a shared zone and increase permeability between the retail and park edge.<br>• Pedestrian bridge landing area at south-eastern end of park |
| Station Precinct Park | 2,100sqm | Provision is to be made for:<br>• Park furniture and spaces for use by workers |
| Community Centre | 2,500 sqm<br>(Total site) | Provision is to be made for:<br>• A multi-purpose community centre<br>• Community building(s) to open onto landscaped open space<br>• Active recreation facilities including a playground<br>• Bike parking and community car park |
| **Plazas** | | |
| Mixed Use Precinct Plazas | 2,000sqm | Provision is to be made for:<br>• At least two pedestrian plazas, one towards the south of the mixed use precinct off Epping Road and the other addressing the Central Open Space<br>• Sufficient shade tree planting to provide shade and shelter<br>• Seating and other street furniture to optimise use of the plazas |
| Station Precinct Plaza | 2,900 sqm | Provision is to be made for:<br>• Pedestrian plaza extending from the station and linking to the pedestrian crossing (or bridge landing area)<br>• Sufficient area to facilitate ease of circulation to the station in peak times from the pedestrian crossing<br>• Mass planting around edge to act as buffer to surrounding roads<br>• Bike parking opposite retail edge<br>• Sufficient shade tree planting<br>• Seating and other street furniture to optimise use of the plaza |

# 4.0

## Public Domain

## 4.1 Streets

### Objectives

a. Provide for a clear street hierarchy incorporating new connector and local roads.

b. Provide primary access points into the Precinct from the surrounding street network.

c. Provide continuous physical and/or visual connections within the Precinct to ensure clear legibility.

d. Ensure connector streets are designed to accommodate movement of buses.

e. Facilitate the development of active street edges.

f. Use streets to define the edges between development and open spaces and to provide passive surveillance opportunities of the open space.

### Controls

1. New streets should conform to the requirements set out in Section 3.2 Circulation Networks.
2. New streets should be designed in accordance with the dimensions set out in Table 4 and the street sections in Figures 6-12.
3. New roads are to have shared services pits to reduce maintenance costs and reduce conflict with street plantings.

**Table 4** Street Dimensions

| | Carriageway | Parking | Planting | Pavements | Reserve |
|---|---|---|---|---|---|
| **Spine Road** | 2 x 3.25m | 2 x 2.5m | 1 x 2.5m + planting in parking bays | 2 x 3.0m | 20m |
| **Local Road** | 2 x 3.25m | 2 x 2.5m | Planting in parking bays | 2 x 3.0m | 17.5m |
| **Local Road M2 Edge** | 2 x 3.25m | 1 x 2.5m<br>2.5m cycleway | Planting in parking bays | 2 x 3.0m | 17.5m |
| **Park Edge Street** | 1 x 4.5m<br>Shared on south side of park | 1 x 2.5m | Planting in parking bays | 1 x 3.0m | 10m |
| **Park Edge Share Way** | 1 x 4.5m adjacent to park edge | 1 x 2.5m | Planting in parking bays | 1 x 3.0m | 10m |
| **Station Street** | 1 x 6.5m<br>1 x 4.5m | 1 x 2.5m | 1 x 3m in swale +<br>1 x 2.5m in footpath +<br>Planting in parking bays footpath | 1 x 3m<br>1 x 9m (including 2.5m for tree planting) | 28.5m |
| **Commercial Street** | 2 x 4m/4.5m | 2 x 2.5m | 2.0m median<br>Planting in parking bays | 2 x 3.0m | 21-26.0m |

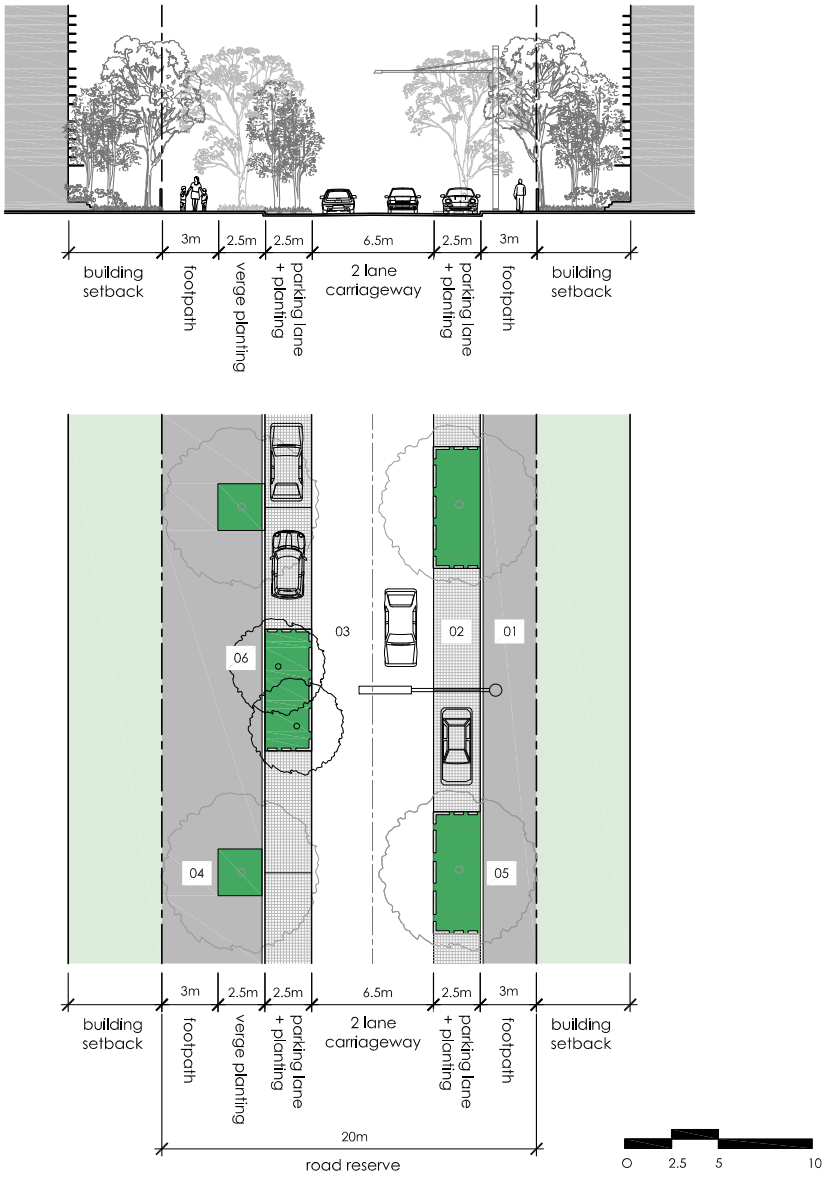


**Figure 6** Spine Road

## High Density Residential Precinct - Spine Road

| | |
|---|---|
| 01 | Spine road footpath;<br>In situ concrete paving, exposed aggregate, abrasive blast, high quality finish with Macquarie Park Standard street granite paving edge |
| 02 | Parking lanes;<br>Permeable paving |
| 03 | Asphalt carriage way |
| 04 | Primary street tree planting<br>In pavement |
| 05 | Street tree planting<br>In parking lane with broken kerb |
| 06 | Street tree planting (secondary)<br>In parking lane with broken kerb |

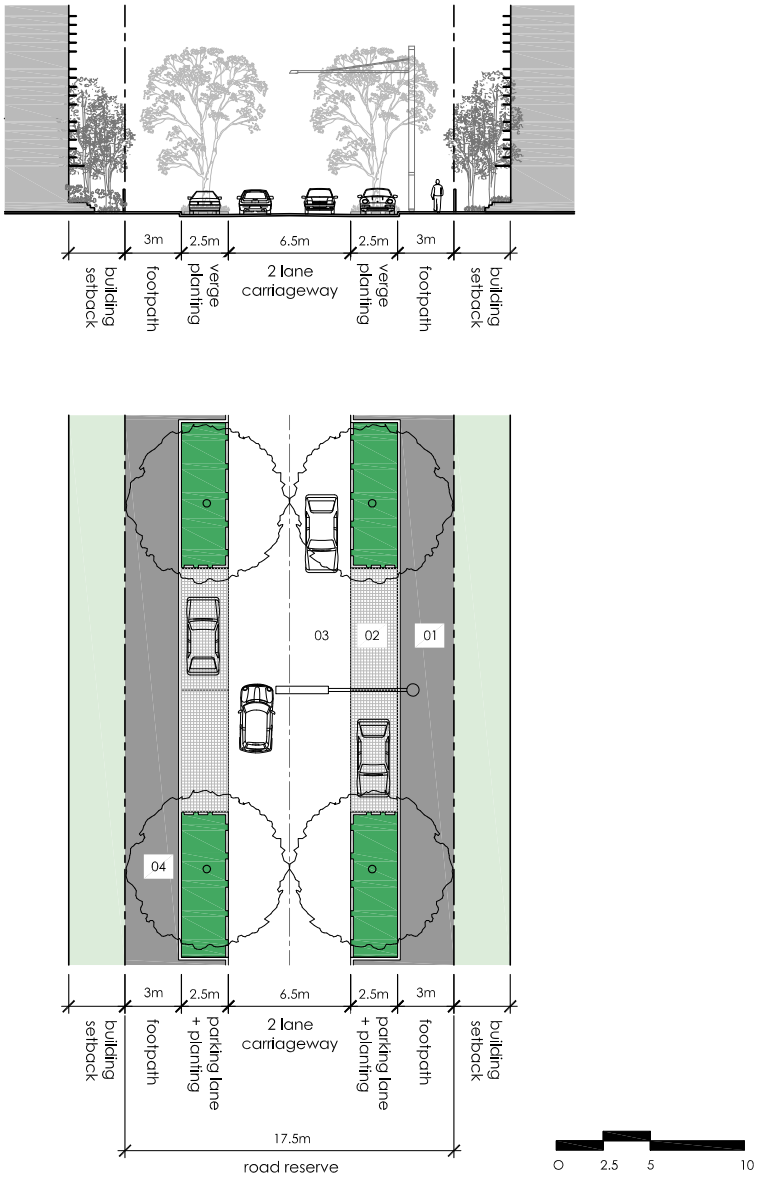


**Figure 7** Local Road

### High Density Residential Precinct - Local Road

| | |
|---|---|
| 01 | Street footpath<br>Asphalt paving |
| 02 | Parking lanes<br>Permeable paving |
| 03 | Asphalt carriage way |
| 04 | Street tree planting<br>In parking lane with broken kerb |

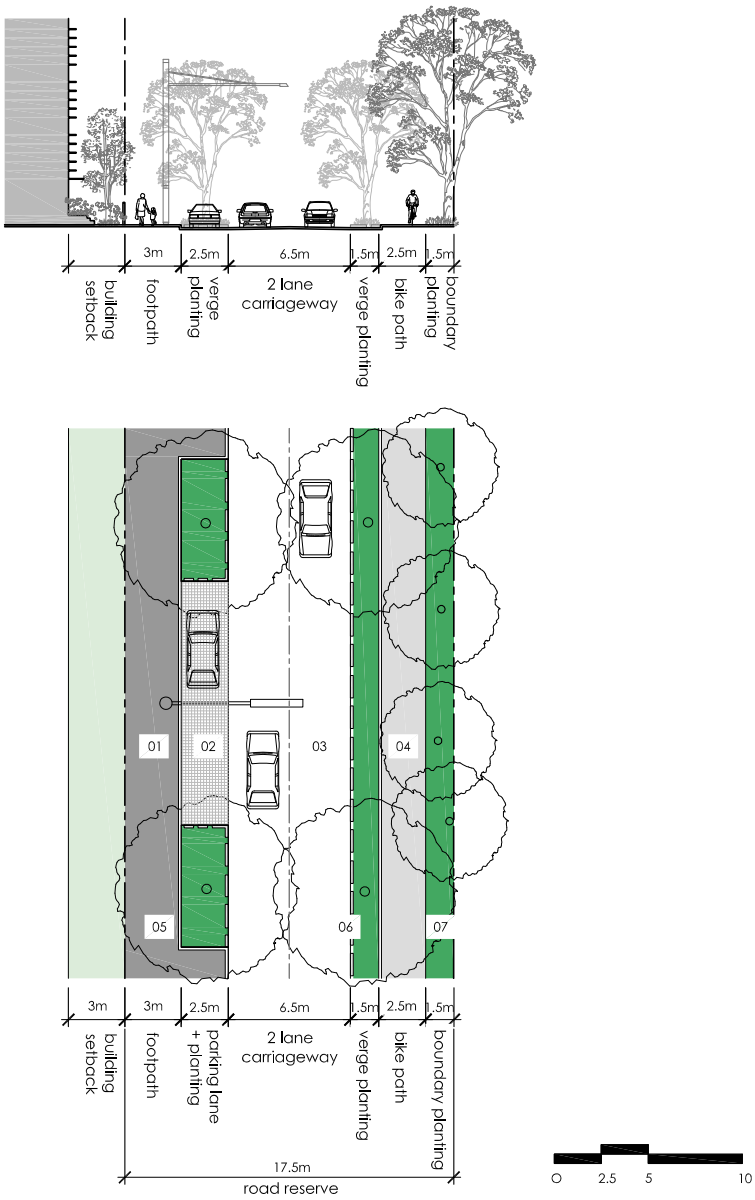


**Figure 8** Local Road M2 Edge

**High Density Residential Precinct - Local Road M2 Edge**

| | |
|---|---|
| 01 | Street footpath<br>Asphalt paving |
| 02 | Parking lanes<br>Permeable paving |
| 03 | Asphalt carriage way |
| 04 | Bike path<br>Concrete paving |
| 05 | Primary street tree planting<br>In parking lane with broken kerb |
| 06 | Street tree planting<br>In swale with broken kerb |
| 07 | Buffer planting |

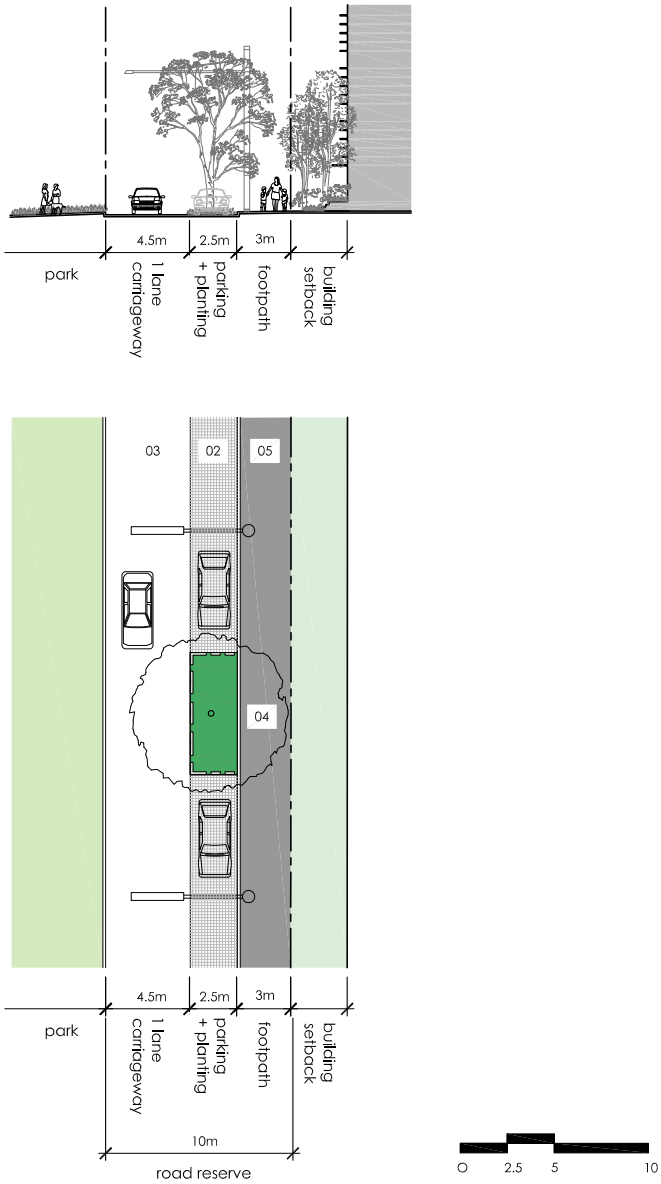


**Figure 9** Park Edge Street

**High Density Residential Precinct – Park Edge Street**

| | |
|---|---|
| 01 | Street footpath<br>Asphalt paving |
| 02 | Parking lanes<br>Permeable paving |
| 03 | Asphalt carriage way |
| 04 | Street tree planting<br>In parking lane with broken kerb |

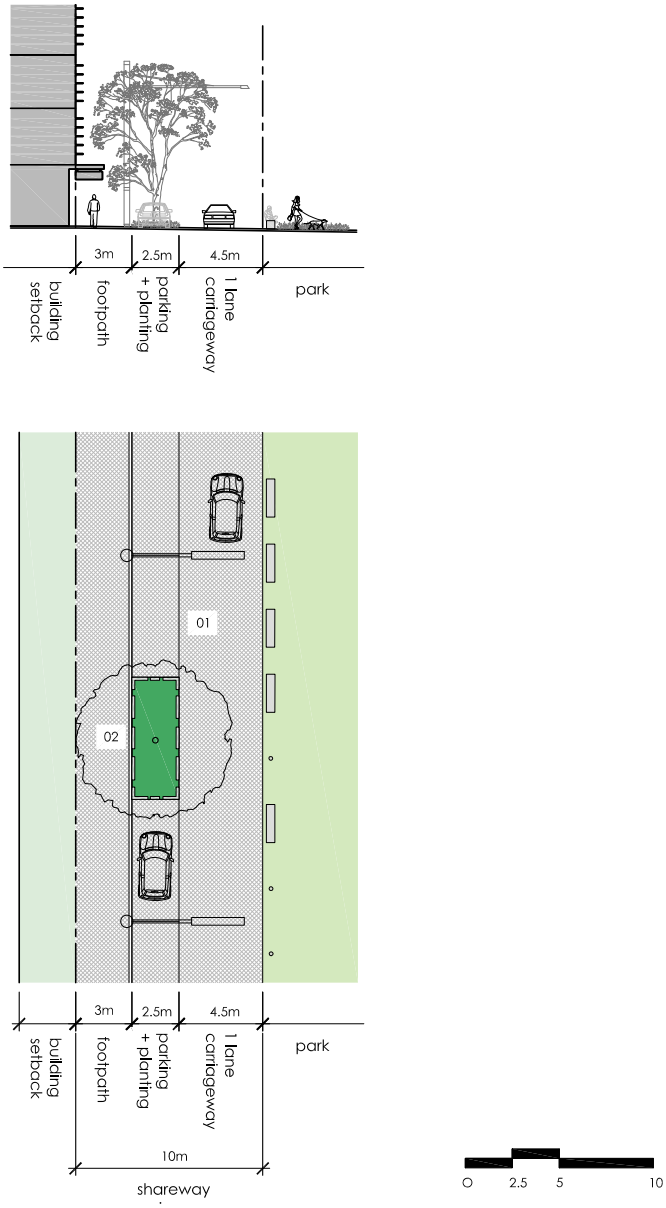


**Figure 10** Park Edge Share Way

**Park Edge - Share Way**

| | |
|---|---|
| 01 | Pedestrian share way<br>Recycled bluestone/concrete setts 90x90x90 |
| 02 | Street tree planting<br>In parking lane with broken kerb |
| 03 | Asphalt carriage way |
| 04 | Street tree planting<br>In parking lane with broken kerb |

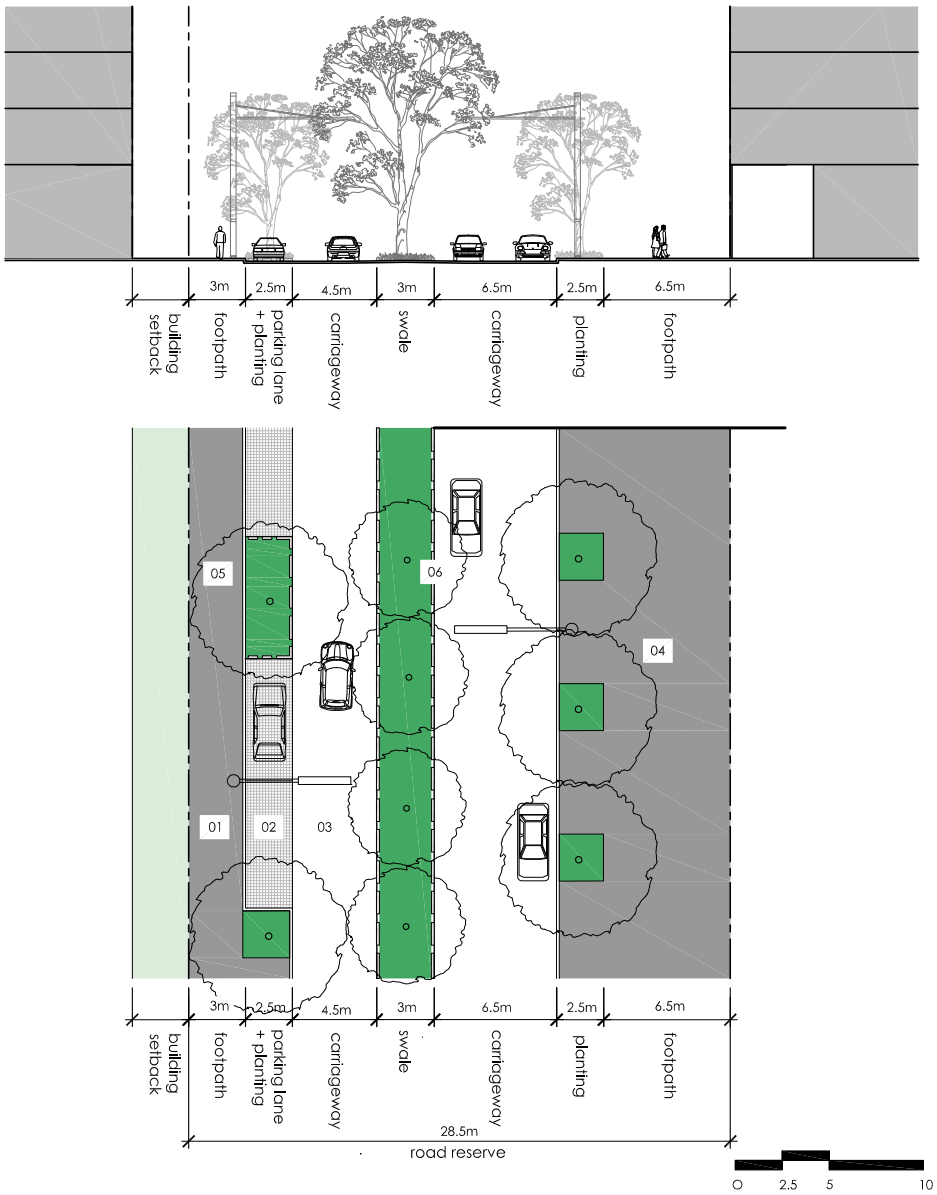


**Figure 11** Station Street

**Station Precinct – Station Street**

| | |
|---|---|
| 01 | Street footpath<br>Asphalt paving |
| 02 | Parking lanes<br>Permeable pavers |
| 03 | Asphalt carriage way |
| 04 | Street tree planting<br>In pavement |
| 05 | Street tree planting<br>In parking lane with broken kerb |
| 06 | Median tree planting<br>In swale with broken kerb |

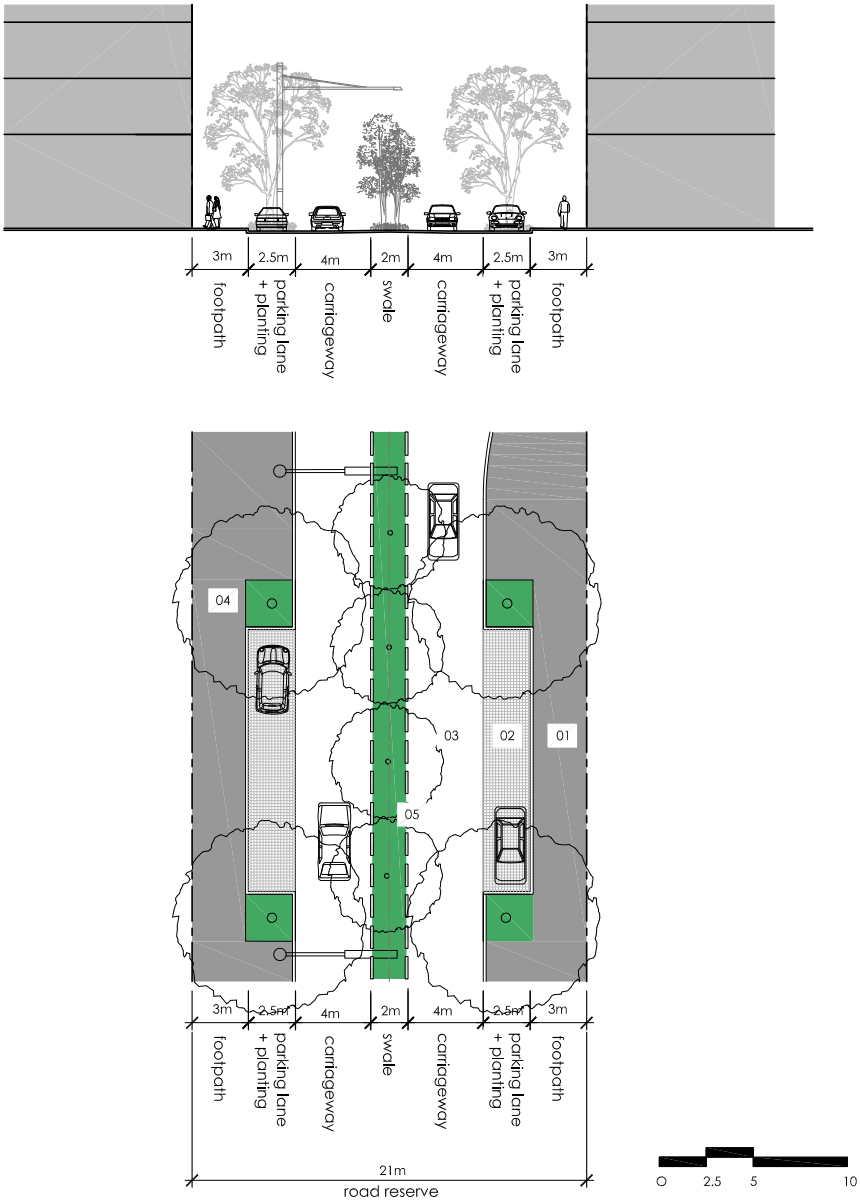


**Figure 12** Commercial Street

### Mixed Use Precinct - Commercial Street

| | |
|---|---|
| 01 | Street footpath<br>Asphalt paving |
| 02 | Parking lanes<br>Permeable pavers |
| 03 | Asphalt carriage way |
| 04 | Street tree planting<br>In pavement |
| 05 | Median tree planting<br>In swale with broken kerb |

## 4.2 Pedestrian and Cycle Network

**Objectives**

a. Create a safe, high quality pedestrian and cycle network.

b. Maximise pedestrian and cycle connections to regional cycle routes through and around the Precinct.

c. Maximise pedestrian and cycle permeability within the Precinct.

d. Maximise interchange opportunities with public transport.

e. Support cycle use by providing appropriate storage and end of trip facilities.

**Controls**

1. Cycle and pedestrian links are to be provided generally in accordance with the Indicative Pedestrian and Cycle Links Plan at Figure 13 and Street Sections at Figures 6-12.
2. Footpaths are to be provided on both sides of streets.
3. A pedestrian link is to be provided between the mixed use precinct and the station precinct to facilitate access to the railway station (refer to Section 4.3).
4. Bicycle parking is to be provided at the station entry, retail nodes and community facilities in centrally located and well defined areas.
5. Cycle facilities are to be provided in accordance with the Ryde Bicycle Strategy and Master Plan 2007 and Bicycle Parking requirements in Part 9.3 of the Ryde DCP 2010.
6. A new pedestrian/cyclist access is to be provided from the Epping Road/Pittwater Road intersection to Delhi Road.
7. Any new access to the station from the south is to provide for disabled access.
8. Any proposed variations to the Indicative Pedestrian and Cycle Links Plan must demonstrate that the proposed changes meet the Objectives for this section.

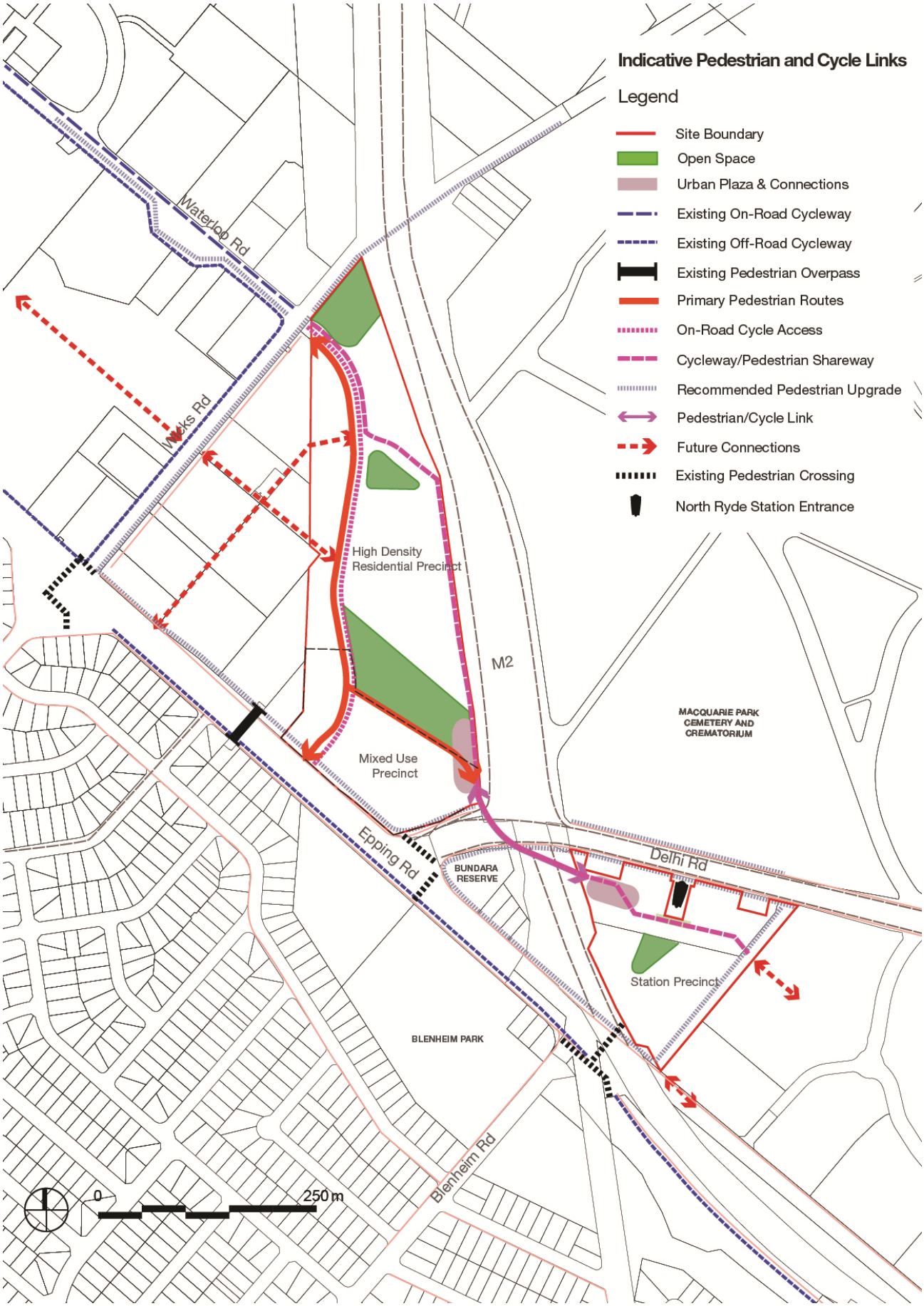


**Figure 13** Indicative Pedestrian and Cycle Links

## 4.3 Pedestrian and Cycle Station Link

**Objectives**

a. Facilitate pedestrian and cyclist access between North Ryde Station and the mixed use precinct.

b. Ensure that access points to the bridge are designed to meet universal access requirements.

c. Ensure the pedestrian is of high quality and acts as a landmark for the Precinct.

**Controls**

1. A pedestrian/cyclist link is to be provided between the North Ryde Station and the mixed use precinct. This link will comprise a bridge between the mixed use precinct and Bundara Reserve and a safe pedestrian/cycle crossing (extension to bridge or at-grade crossing) between Bundara Reserve and North Ryde Station.
2. The link and open space at either end will provide universal access between the mixed use precinct and the station precinct.
3. The bridge is to be designed as a roll-on and roll-off design.
4. Access is to be barrier free.
5. The bridge is to be constructed of lightweight materials to minimise the overall bulk of the structure and adverse visual impacts in relation to the Macquarie Park Cemetery and Crematorium.
6. Any signage on the bridge is to comply with the requirements of State Environmental Planning Policy No 64 – Advertising and Signage.
7. The bridge is to provide for a 5.5 metre clearance over Delhi Road.
8. The link between the North Ryde Station and the mixed use precinct is to be of sufficient width to safely accommodate dual pedestrian and cyclist movements.
9. The link is to be designed to minimise impacts on native vegetation in Bundara Reserve.
10. Other design requirements for the bridge are:
    a. Provision of perforated galvanised steel safety screens 3 metre high over major roads;
    b. Provision of hand rails along full length of the bridge;
    c. Incorporation of wayfinding signage;
    d. Integration of lighting within the bridge deck and along the length of the pedestrian link;
    e. Incorporation of local drainage, with stormwater discharge point at either landing; and
    f. Provision of vertical transport and stairs to the Bundara Reserve, if required.

## 4.4 Stormwater Management

**Objectives**

a. Provide for a Precinct-wide approach to stormwater management.

b. Reduce stormwater discharge from the site.

c. Improve stormwater quality and minimise water consumption through implementation of water sensitive urban design measures.

**Controls**

1. An Integrated Water Management Plan is to be prepared for the Precinct to incorporate water sensitive urban design measures and ensure that stormwater systems are designed and built to minimise pollutant discharges into receiving waterways.

2. The Integrated Water Management Plan is to be prepared in consultation with Council and by a qualified practising Civil Engineer with relevant experience in stormwater and environmental engineering , and include:

    a. The identification of existing hydrology conditions;

    b. Objectives and performance standards for water cycle outcomes that are to be achieved during construction and operation of the project, having regard to stormwater management provisions in the Ryde DCP 2010;

    c. Water management measures to meet objectives and performance standards referred to in clause 4.4(2)(b) including but not limited to:

        i. On site storage for rainwater reuse;

        ii. Stormwater treatment devices to remove gross pollutants, sediments, oils and greases from first flush stormwater run-off;

        iii. Bioremediation swales;

        iv. Other water sensitive urban design measures such as water efficient irrigation systems, rainwater tanks, and use of drought tolerant plant species.

3. Two separate Integrated Water Management Plans may be prepared for the Precinct, being for:

    a. the station precinct; and

    b. the high density residential and mixed use precincts combined.

4. The Integrated Water Management Plan(s) is/are to address the objectives and controls of this section and if two separate plans are prepared each is to identify any combined/cumulative impacts and shared water management measures, as relevant.

5. The Integrated Water Management Plan(s) is/are to be lodged with the first development application for construction works and approved prior to commencement of works.

## 4.5 Street Tree Planting

**Objectives**

a. Reinforce the street hierarchy, with each street type having a distinctive character based on street tree planting.

b. Utilise tree species that are of an appropriate scale and form and respond to their local context.

c. Recognise the role of street trees in habitat creation and providing bio-links and connections.

d. Create signature planting on key streets.

**Controls**

1. A Street Tree Plan for each Sub-Precinct is to be lodged with the first development application for road construction works and approved prior to commencement of road construction works for that Sub-Precinct.
2. The Street Tree Plan is to identify the location, species, planting methodology and maintenance of street trees to satisfy the objectives and controls of this section, and ensure an appropriate degree of consistency is achieved between the different Sub-Precincts.
3. Street tree planting is to be provided on all streets and generally in accordance with the City of Ryde Street Tree Master Plan.
4. Street tree planting is to be designed in accordance with the following principles:
    a. Street trees should be used to distinguish between public and private space;
    b. Street tree planting should be durable and include a mix of indigenous and exotic species;
    c. Street trees are to contribute to place making and way finding; and
    d. Street trees should generally be of uniform species within the one street.
5. Street trees are to be planted in accordance with the relevant street sections, as shown in Figures 6-12.
6. Street tree planting is to be coordinated with subdivision layout, traffic plan and services layouts to ensure appropriate configuration with vehicle crossovers, sight lines, drainage swales, lighting and other services.

## 4.6 Street Furniture and Lighting

**Objectives**

a. Provide a high quality public domain that contributes to the character of the Precinct.

b. Create a specific and consistent identity for the various precincts through the use of street furniture and lighting.

c. Provide a robust public domain that ensures ongoing maintenance requirements are minimised.

d. Minimise visual clutter in the public domain.

e. Ensure the security and legibility of the public domain.

**Control**

1. Street furniture and lighting is to be provided in accordance with the Macquarie Park Public Domain Technical Manual.

## 4.7 Public Art

**Objective**

a. Enhance the sense of place through the provision of public art.

**Controls**

1. Developments (excluding infrastructure works) with a capital investment value of $5 million or more are to include an element of public art.
2. Details of the nature of the work, its approximate location and size are to accompany the development application.
3. The application must address how the proposed public art meets the following Design Selection Criteria:
    a. Standards of excellence and innovation;
    b. Relevance and appropriateness of the work in relation to its site;
    c. Its contribution to creating sense of place, and integration into the built form;
    d. Where possible, participation of local artists, local groups, youth or indigenous groups;
    e. Consideration for public safety and the public's use of and access to the public space;
    f. Consideration of maintenance and durability requirements of materials, including potential for vandalism and graffiti;
    g. Where applicable, consistency with current planning, heritage and environmental policies and plans of management; and
    h. Evidence of appropriate Public Liability Insurance to cover construction and installation of work.

## 4.8 Safety

**Objectives**

a. Minimise opportunities for criminal and anti-social behaviour.

b. Ensure development is undertaken in accordance with the principles of Crime Prevention Through Environmental Design.

**Controls**

1. Incorporate the principles of Crime Prevention Through Environmental Design (CPTED) and Safer by Design (NSW Police) into the design of the public domain.
2. Planting alongside pathways is to be a combination of canopy trees and groundcovers so that sight lines are not obstructed.
3. The public domain is to be lit to comply with Australian Standards.
4. Open spaces are to have more than two access points so that people cannot be cornered.
5. Retail and commercial activities are to be located adjacent to open space so that the open space is activated.
6. In areas not zoned for retail or commercial activities, buildings are to be designed with entries and windows to habitable rooms overlooking open space.
7. Road widths and lengths, block lengths, and building setbacks are to be designed to reinforce the human scale of the development and encourage walking, cycling and use of the public domain.

# 5.0

# Built Form

*Note: All development for residential flat buildings (that is, apartment buildings three storeys and over) must meet the requirements of State Environmental Planning Policy No 65 – Design Quality of Residential Flat Development (SEPP 65).*

*To ensure that proposals for residential flat development can achieve the 10 design quality principles set out in SEPP 65, applicants and architects should also have regard to the Residential Flat Design Code when designing new developments.*

*The following objectives and controls as they relate to residential flat buildings are intended to complement the provisions in SEPP 65 and the Residential Flat Design Code.*

## 5.1 Street Frontage Heights

**Objectives**

a. Ensure a comfortable street environment for pedestrians in relation to daylight, scale, sense of enclosure and wind mitigation, as well as healthy environments for street trees.

b. Provide a strong, consistent and appropriate definition of the public domain.

c. Ensure sunlight access to key streets and public spaces.

**Control**

1. Buildings are to generally comply with street frontage heights as shown in Figures 14 to 16.

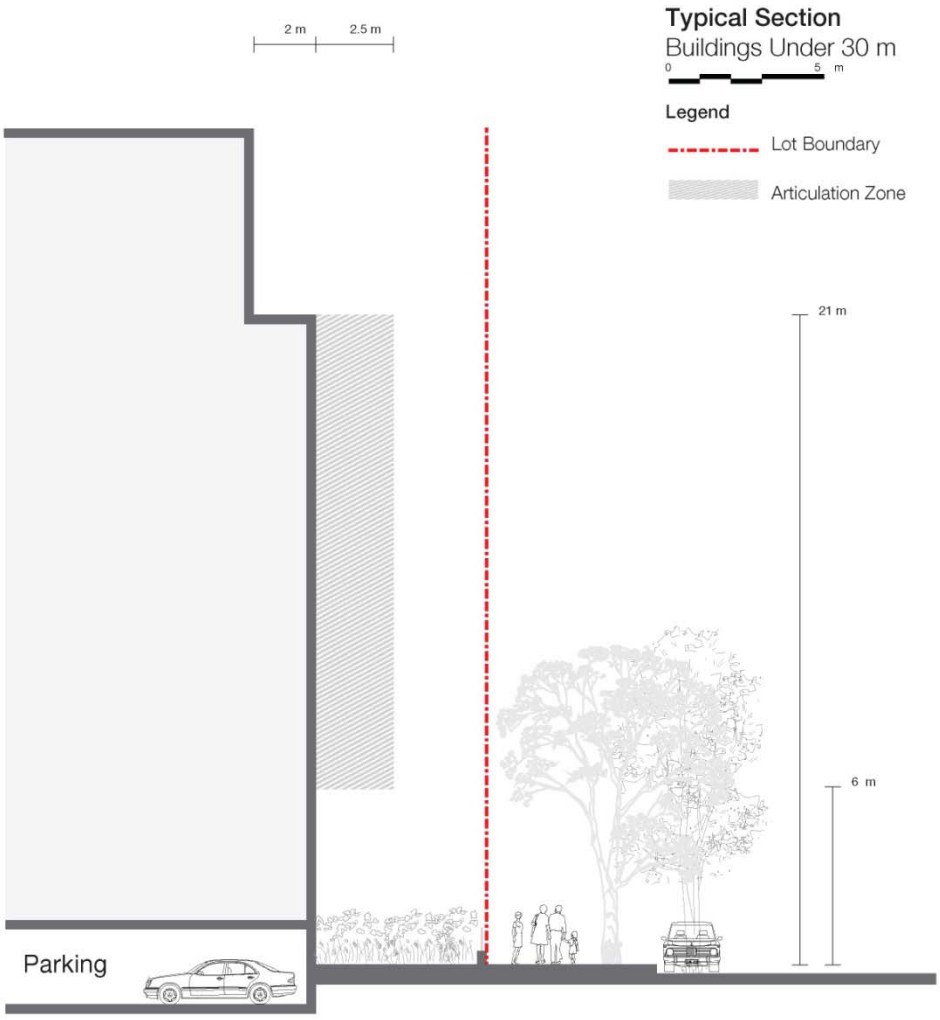


**Figure 14** Streetwall Section – Buildings under 30m

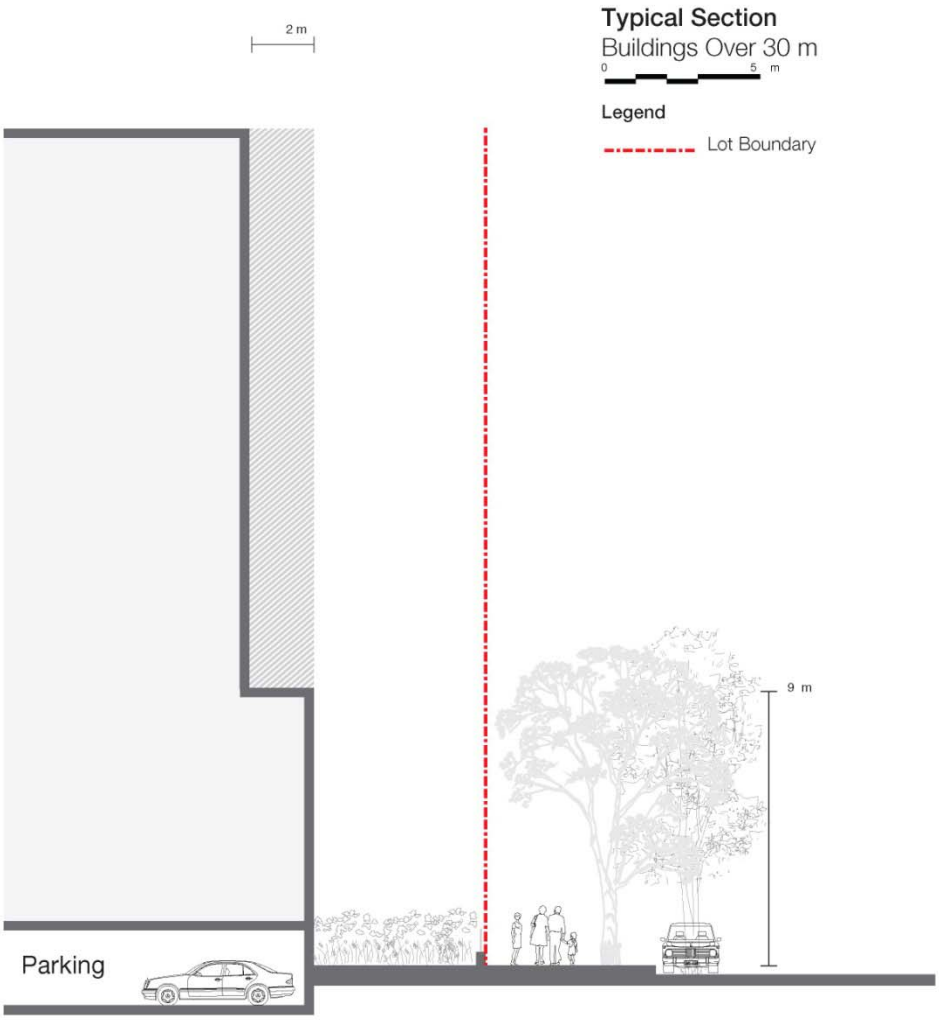


**Figure 15** Streetwall Section - Buildings over 30m

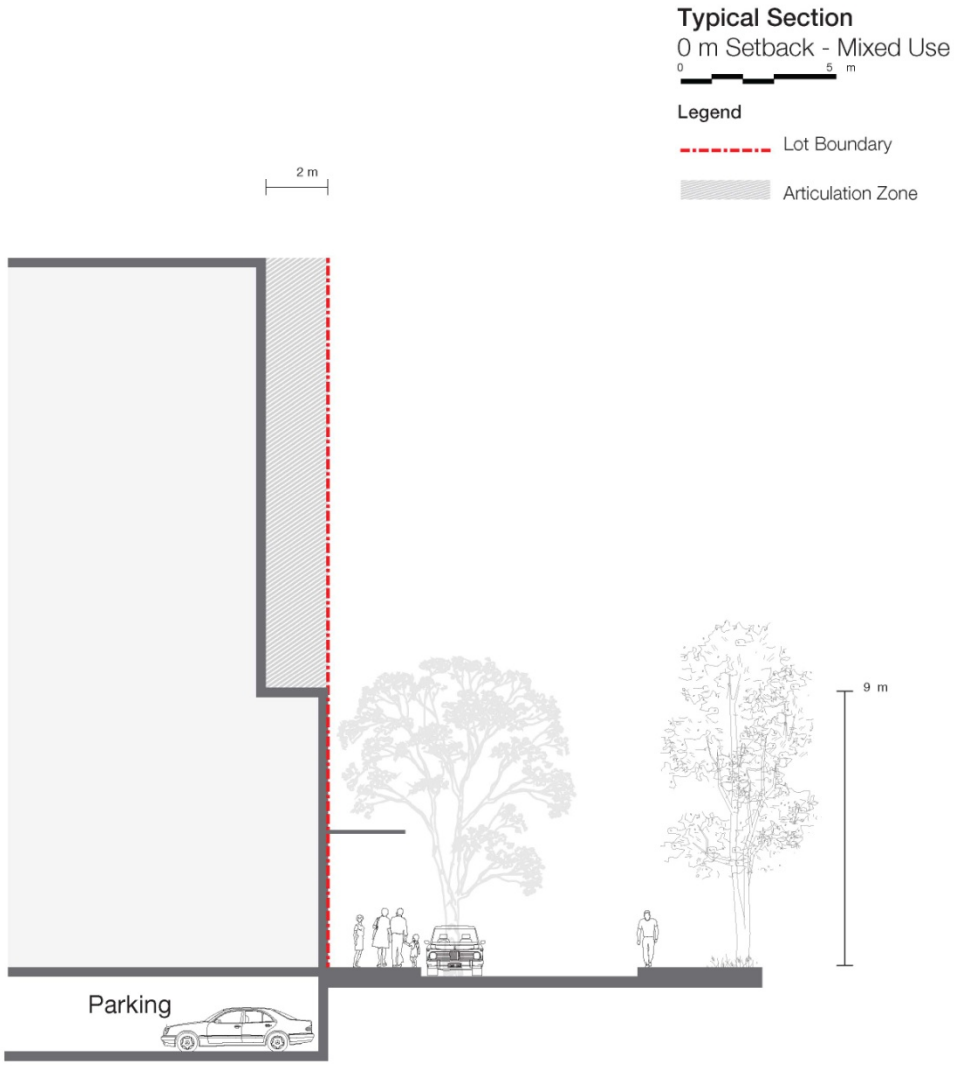


**Figure 16** Streetwall Section – 0m setback (mixed use)

## 5.2 Building Setbacks

**Objectives**

a. Create streets which contribute to the character and identity of the Precinct.

b. Provide variety and activation of street frontages.

c. Create pedestrian amenity.

d. Provide building separation for visual and acoustic privacy as well as solar access.

e. Contribute to the landscape character of the Precinct.

### Controls

1. Building setbacks are to be provided generally in accordance with Table 5.
2. Setbacks between buildings are to comply with SEPP 65 and the Residential Flat Design Code.
3. Buildings are to be aligned to the street to define and frame the street edge.
4. Buildings are to provide clear delineation between the public and private domain.

**Table 5** Building Setback Requirements

| **Street** | **Building Setback Requirement** |
|---|---|
| Epping Road | 5 metre landscaped setback |
| Spine Road, Delhi Road | 5 metre setback |
| Other road frontages | 3 metre setback |
| **Open Space** | |
| North Bushland Park, Community Park, Central Open Space | 3 metre setback |
| Public Plazas | 3 metre setback |
| **Interface with Macquarie Park (western boundary)** | 6 metre setback |

*Note: Building setbacks can be varied subject to meeting acceptable performance based solutions.*

## 5.3 Building Depth and Bulk

### Objective

a. Reduce the apparent bulk and scale of buildings by breaking up expanses of building walls with modulation of form and articulation of façades.

### Controls

1. No building above 22 metres in height is to have a building length that aligns to a street in excess of 50 metres.
2. All points on an office floor are to be no more than 10 metres from a source of daylight (e.g. windows, atria or light wells) in buildings less than 24 metres in height, and no more than 12.5 metres from a window or daylight source in buildings over 24 metres in height.
3. Use atria, light wells and courtyards to improve internal building amenity and achieve cross ventilation and/or stack ventilation.

## 5.4 Mixed Use Buildings

**Objectives**

a. Encourage a variety of mixed use developments in the mixed use zones of the Precinct.

b. Create lively streets and public spaces in the Precinct.

c. Promote non-residential uses at the lower levels of buildings, including immediately adjacent to Epping Road.

d. Increase the diversity and range of shopping and recreational activities for workers and residents.

e. Enhance public safety by increasing activity in the public domain on weeknights and on weekends.

f. Minimise potential conflicts and achieve compatibility between different uses.

g. Encourage building designs that meet the broadest range of occupants' needs possible, and which can accommodate whole or partial changes of use.

h. Ensure that the design of mixed use buildings addresses residential amenity.

i. Create separate, legible and safe access and circulation in mixed use buildings.

j. Ensure that mixed use buildings address the public domain and the street.

**Controls**

1. Provide flexible building layouts which allow variable tenancies or uses on the first two floors of a building above the ground floor.

2. The first two floors above ground are to have a minimum floor to ceiling height of 3.3m to maximise future adaptability of units.

3. Minimum floor to ceiling heights for residential developments are to comply with the requirements of the Residential Flat Design Code.

4. Provide non-residential uses at the lower levels of buildings immediately adjacent to Epping Road.

5. Separate commercial service requirements, such as loading docks, so as not to interfere with residential access, servicing needs and primary outlooks.

6. Locate clearly identified residential entries directly from the public street.

7. Clearly separate commercial and residential entries and vertical circulation.

8. Incorporate the Safety principles of the Residential Flat Design Code into the design of residential flat buildings.

9. Provide security access controls to all entrances into private areas, including car parks and internal courtyards.

10. Provide safe pedestrian routes through the site, where required.

11. Front buildings onto major streets with active uses.

12. Avoid the use of blank building walls at the ground level.

## 5.5 Building Design and Materials

**Objectives**

a. Contribute positively to the streetscape and public domain by means of high quality architecture and robust selection of materials and finishes.

b. Provide richness of detail and architectural interest especially at visually prominent parts of buildings such as lower levels and roof tops.

c. Ensure that building elements such as awnings, sun screens, shading devices, roof structures and services elements are integrated into the overall building form and façade design.

d. Present appropriate design responses to nearby development that complement the streetscape.

e. Clearly define the adjoining streets, street corners and public spaces and avoid ambiguous external spaces with poor pedestrian amenity and security.

**Controls**

1. Balconies and terraces are to be provided, particularly where buildings overlook parks and on low rise parts of buildings. Gardens on the top of setback areas of buildings are encouraged.

2. Articulate façades so that they address the street and add visual interest. Avoid extensive expanses of any single material.

3. Building design is to include articulation of the ground floor elevation to enable it to read differently from the upper floors.

4. External walls are to be constructed of high quality and durable materials and finishes with 'self-cleaning' attributes, such as face brickwork, rendered brickwork, stone, concrete and glass. Finishes with high maintenance costs, those susceptible to degradation or corrosion that result in unacceptable amenity impacts, such as reflective glass, are to be avoided.

5. Limit opaque or blank walls for ground floor uses.

6. Maximise glazing for retail uses and break glazing into sections to avoid large expanses of glass.

7. Highly reflective finishes and curtain wall glazing are not permitted above ground floor level.

8. A materials sample board and schedule is required to be submitted with applications for development with a capital investment value of $1 million or more for that part of any development built to the street edge.

9. Minor projections up to 450mm from building walls in accordance with those permitted by the Building Code of Australia may extend into the public space, providing they do not fall within the definition of

gross floor area and there is a public benefit, such as expressed cornice lines that assist in enhancing the streetscape.

10. The design of roof plant rooms and lift overruns is to be integrated into the overall architecture of the building.
11. Facade design is to reflect and respond to the orientation of the site using elements such as sun shading and environmental controls where appropriate.
12. Important corners are to be expressed by giving visual prominence to parts of the façade (e.g. a change in building articulation, material or colour).
13. Ventilation louvres and car park entry doors are to be coordinated with the overall façade design.

## 5.6 Overshadowing

**Objectives**

a. Minimise overshadowing of existing residential properties outside of the Precinct.

b. Minimise overshadowing of public open spaces and reserves outside of the Precinct.

c. Ensure good solar access for new public open spaces and publically accessible open spaces within the Precinct.

d. Ensure good solar access to retail and community areas within the Precinct.

e. Ensure that the development of residential flats meet the requirements of SEPP 65 and the Residential Flat Design Code.

**Controls**

1. Detailed overshadowing studies are to be lodged with development applications for buildings.
2. Daylight access for residential flats is to be provided in accordance with the Daylight Access provisions in the Residential Flat Design Code.
3. Solar access to communal open spaces for residents is to be maximised. At least 50% of communal courtyards must receive a minimum of 3 hours direct sunlight between 9am and 3pm on June 21.
4. At least 50% of new public open space is to receive 3 hours direct sunlight between 9am and 3pm on June 21.
5. No overshadowing of residential lots outside of the Precinct is to occur after 11 am on June 21.
6. No overshadowing of Blenheim Park or Bundara Reserve is to occur after 9am on June 21.
7. No overshadowing of Myall Reserve is to occur after 11 am on June 21.
8. No overshadowing of Yinnell Reserve is to occur after 12:30 pm on June 21.

## 5.7 Landscape Design

**Objectives**

a. Provide occupants with passive recreational opportunities.

b. Provide for soft landscaping and deep soil planting.

c. Improve stormwater quality and minimise water consumption through implementation of water sensitive urban design guidelines.

d. Provide a pleasant outlook and contribute to the landscape character of the Precinct.

e. Enhance solar access into buildings/open spaces with due consideration for shade provision.

**Controls**

1. A minimum 30% of the developable area of residential sites is to be provided as Landscaped Area. For the purposes of Section 5.8 Landscape Design, Landscaped Area means:

   *Area on the site not occupied by any buildings, except for swimming pools or open air recreation facilities, which is landscaped by way of gardens, lawns, shrubs or trees and is available for use and enjoyment by the occupants of the building, excluding areas used for driveways, parking areas or drying yards.*

2. Appropriate shading is to be provided in the design of communal spaces to facilitate use during summer.

3. Communal open spaces are to incorporate the primary deep soil area where possible. The landscaping of courtyard spaces is to provide for the growth of mid to large size trees.

4. Landscaped areas are to incorporate trees, shrubs and ground covers endemic to the area where appropriate.

5. Landscaping is to contribute to water efficiency and effective stormwater management.

6. Deep soil planting within residential and mixed use developments is to be provided in accordance with the Deep Soil Zone provisions in the Residential Flat Design Code.

# 6.0

# Pedestrian Amenity

## 6.1 Active Street Frontages

**Objectives**

a. Create active street frontages around areas of high pedestrian traffic, including plazas and open space.

b. Encourage activity within the Precinct outside commercial business hours.

c. Enhance pedestrian safety, security and amenity within the Precinct.

**Controls**

1. Retail development is to be provided within the mixed use precinct adjacent to the central open space and in the vicinity of the entrance to North Ryde Station within the station precinct.

2. Buildings within the mixed use and station precincts are to be designed to provide high activity zones. Active ground level uses are required on all street frontages in these areas.

3. Buildings adjacent to or opposite open space are to have 'entry points' (such as gates or front doors) to activate the space, and make it feel inhabited to maximise visibility along the public domain.

4. Glazing of windows and doors of building frontages in the mixed use zone should be maximised.

5. Commercial and residential lobbies are not to occupy more than 25% of the total length of the building's street frontage

6. Entries to active frontage tenancies are to be accessible and at the same level as the adjacent footpath.

7. Active uses in the mixed use zone are to occupy the street frontage for a depth of at least 10m.

8. Residential street frontages are to ensure access by gate or door from the public domain. Partially visible private gardens should be considered.

## 6.2 Awnings

**Objectives**

a. Provide weather protection, safety and security for pedestrians.

b. Unify the streetscape.

c. Demarcate building entries and contribute to the image and identity of development.

**Controls**

1. Awnings are to be provided at key pedestrian and active frontage locations, including along Delhi Road adjacent to the station and within the mixed use precinct.

2. Awning width is to be appropriate to the building design and streetscape and have regard to the location of street trees.

3. Awnings are to have a minimum soffit height of 3.6m above the finished ground floor level. On sloping sites, awning soffit height may vary from 3.6m to 4.2m.
4. Where the topography slopes along the street, awnings are to step to provide a regular height over the footpath. Steps in awnings should not exceed 600mm.
5. Awnings are to provide adequate weather protection.
6. Glazing is not permitted in continuous awnings.
7. Under awning lighting is to be provided to achieve appropriate luminance levels for pedestrians (refer to relevant Australian Standards). This should be recessed into the soffit of the awning.
8. Entry canopies and discontinuous awnings may be provided to building entries not located along active frontages.
9. Entry canopies may be glazed or solid, and are to be coordinated with the overall facade design.
10. Canopies are to have a minimum soffit height of 3.6m, and canopy soffit height may vary from 3.6m to 4.2m.

## 6.3 Signage

Signage is to comply with the Macquarie Park controls as set out in Section 6.1.14 of Part 4.5 of the Ryde DCP 2010. In particular, wayfinding and directional signage is to be installed throughout the development and at site entry points.

# 7.0

# Access, Parking and Servicing

## 7.1 Vehicular Access

**Objectives**

a. Integrate adequate car parking, access and servicing without compromising street character, landscape or pedestrian amenity and safety.

b. Encourage the active use of street frontages.

c. Ensure that vehicle crossings over footpaths minimise disruption to pedestrian movement and do not threaten safety.

d. Make vehicle access to buildings compatible with the public domain.

e. Ensure vehicle entry points are integrated into building design and contribute to high quality architecture.

**Controls**

1. Design of driveway crossings is to be in accordance with Part 8.3 of Ryde DCP 2010.

2. Driveway widths/grades, vehicular ramp width/grades and passing bays are to be in accordance with the relevant Australian Standard.

3. The location and design of access ways to underground parking is to consider residential amenity particularly the location of doors and windows of habitable rooms.

4. Potential pedestrian/vehicle conflict is to be minimised by:

    a. providing vehicle access from minor or secondary streets rather than primary streets or streets with major pedestrian activity, where practicable;

    b. limiting the width and number of vehicle access points - generally one crossing per lot will be permitted and where practicable, adjoining buildings may share or amalgamate vehicle access points;

    c. ensuring clear sight lines at pedestrian and vehicle crossings;

    d. utilising traffic calming devices;

    e. separating and clearly distinguishing between pedestrian and vehicular accessways; and

    f. all vehicles must be able to enter and leave the site in a forward direction.

5. The appearance of car parking and service entries is to be improved by:

    a. minimising the size, quantity and visual intrusion of vehicle access points;

    b. locating or screening garbage collection, loading and servicing areas visually away from the street;

    c. setting back or recessing car park entries from the main façade line;

    d. avoiding black holes in the façade by providing security doors to car park entries;

e. where doors are not provided, it is to be ensured that the visible interior of the car park is incorporated into the façade design and material selection and that building services pipes and ducts are concealed;

f. returning the façade material into the car park entry recess for the extent visible from the street as a minimum; and

g. avoiding ramping vehicular access along boundary alignments edging the public domain and streets.

## 7.2 Car Parking

**Objectives**

a. Ensure development in the Precinct meets the objectives of Transit Oriented Development by limiting private vehicle usage.

b. Ensure that parking provision rates acknowledge capacity constraints on the surrounding road network and access restrictions.

c. Minimise traffic congestion in the Precinct.

d. Minimise car dependency for commuting and recreational transport use and promote alternative means of transport.

e. Provide opportunities for car share schemes.

f. Provide adequate car parking for building users and visitors, depending on building use and proximity to public transport.

g. Minimise the visual impact of car parking on streets, public spaces and adjoining sites.

**Controls**

1. A Parking Management Strategy is to be prepared to address the co-ordination and management of on-street parking for the Precinct and identify measures to address potential parking overspill into surrounding areas, including the Macquarie Park Cemetery and Crematorium.

2. Two separate Parking Management Strategies may be prepared for the Precinct, being for:

   a. the station precinct; and

   b. the high density residential and mixed use precincts combined.

3. The Parking Management Strategy(ies) is/are to address the objectives and controls of this section and identify any combined/cumulative impacts and shared parking management measures, as relevant.

4. The Parking Management Strategy(ies) is/are to be lodged with the first development application for residential/commercial development and approved prior to first occupation by residents/workers.

5. Development applications for residential and commercial development must be accompanied by a traffic and transport impact assessment. The traffic and transport impact assessment is to:

    a. provide an assessment of the impact of the proposal on the traffic network;

    b. demonstrate how the development maximises access by sustainable modes of transport and reduces car dependency consistent with Transit Oriented Development principles; and

    c. accommodate car share schemes based on consultation with car share providers and having regard to best practice.

6. Development is to comply with the car parking controls for Macquarie Park, as set out in Section 6.3.8 of Part 4.5 of the Ryde DCP 2010, with the exception of car parking rates which are to comply with Table 6 below.

**Table 6** Car Parking Rates

| Use | Maximum Parking Rate |
|---|---|
| Commercial | 1 space per 90sqm GFA |
| Retail | 1 space per 100sqm GFA |
| Supermarket | 1 space per 60sqm GFA |
| Residential | 0 space per studio<br>0.6 space per one bedroom dwelling<br>0.9 space per two bedroom dwelling<br>1.4 space per three bedroom dwelling<br>1 space per 10 dwellings for visitor parking |
| Community | 1 space per 100sqm GFA |
| Student housing and serviced apartments | 1 space per 5 bedrooms |

## 7.3 Bicycle Parking

**Objective**

a. Ensure that bicycle parking is considered in all development and provided in appropriately scaled developments with end of trip facilities such as change rooms, showers and secure areas for bike parking.

**Control**

1. Bicycle parking is to be provided in accordance with Section 6.3.8 of Part 4.5 of the Ryde DCP 2010.

## 7.4 Site Facilities and Services

Site facilities and services are to comply with the Macquarie Park controls set out in Section 6.3.6 of Part 4.5 of the Ryde DCP 2010.

## 7.5 Work Place Travel Plan

Work Place Travel Plans will be required for all commercial developments that exceed 5,000 sqm floor space or 100 employees. If a Work Place Travel Plan is required, it must be prepared in accordance with the Macquarie Park Work Place Travel Plan controls set out in Section 6.3.9 of Part 4.5 of the Ryde DCP 2010.

## 7.6 Accessible Design

**Objective**

a. Ensure that the design of new development and the public domain provides equitable, safe and legible access for people with disabilities.

**Controls**

1. Development is to be designed to comply with the controls set out in Part 9.2 of the Ryde DCP 2010 – Access for People with Disabilities.
2. In designing new developments and the public domain, consideration is to be given to the recommendations of the National Disability Strategy NSW Implementation Plan 2012 (particularly the section titled *Inclusive and Accessible Communities*) and the NSW Disability Action Plan 2012-2017.

# 8.0

# Environmental Management

## 8.1 Environmental Performance

**Objectives**

a. Reduce the necessity for mechanical heating and cooling.

b. Reduce reliance on fossil fuels.

c. Minimise greenhouse gas emissions.

d. Reduce environmental impact over the life cycle of a building.

**Controls**

1. All multi-unit residential buildings are to be assessed and certified against Green Star (Design Rating) and achieve a minimum 4 star rating.

2. All commercial buildings are to be assessed and certified against Green Star (Design Rating) and achieve:

    a. A minimum 5 star rating (if the associated Development Application is lodged before 1 January 2017);

    b. A minimum 6 star rating (if the associated Development Application is lodged on or after 1 January 2017).

3. Potable water demand in residential buildings is to be reduced by at least 50% from BASIX baseline for an average household.

4. Potable water demand in commercial buildings is to be reduced to achieve a 4.5 stars NABERS water rating.

5. Potable water demand in retail buildings is to be reduced to achieve a 4.5 stars NABERS water rating.

6. All buildings are to be connected to smart water metering.

7. All buildings with basement parking should make provision for electro-voltaic charging infrastructure to allow for the transition to electric car technology.

8. The following targets for the reduction in energy use are to be met.

    a. BASIX 25 – achieve a 25% reduction in $kgCO_2$ – e/person/year in residential buildings 6 storeys or higher;

    b. BASIX 35 – achieve a 35% reduction in $kgCO_2$ – e/person/year in residential buildings 4-5 storeys;

    c. BASIX 45 – achieve a 40% reduction in $kgCO_2$ – e/person/year in residential buildings 1-3 storeys.

9. All residential buildings are to achieve:

    a. A 7 star NatHERS for heating and cooling where development applications are lodged prior to 1 January 2017;

b. An 8 star NatHERS for heating and cooling where development are lodged on or after 1 January 2017.

10. Commercial buildings are to achieve NABERS 5.5 star (equating to an 11% $kgCO_2$ e/sqm/year reduction compared to 5 star).

## 8.2 Flooding

**Objectives**

a. Ensure essential services and land uses are planned in recognition of flooding risks.

b. Manage the risk to human life and damage to property caused by flooding through controlling development on land affected by potential floods.

c. Apply a merit based approach to proposals that relate to flood affected land – taking into account flooding, social, economic, ecological and design considerations.

**Controls**

1. To ensure emergency vehicles can access the site during a major storm event, alternative site access is to be provided to the high density residential precinct for emergency vehicles. The alternative access is to be identified in consultation with the NSW State Emergency Service and other relevant agencies.

2. The proposed future road connecting the high density residential precinct with Wicks Road is to be designed to accommodate future flood mitigation works that seek to relieve existing flooding impacts on Wicks Road.

3. Development applications for proposed residential buildings within lots identified as having a Medium Flood Risk, as identified in the *Macquarie Park Floodplain Risk Management Study and Plan* (Final Report, Bewsher Consulting, February 2011) are to:

    a. be accompanied by a site specific flood assessment;

    b. ensure that floor levels are designed at 0.5m above the 1 in 100 year ARI flood event;

    c. be designed for safe egress and evacuation;

    d. demonstrate that either:

        i. a setback or drainage easement will divert stormwater runoff away from adjacent lots and into the Porters Creek corridor; or

        ii. compensatory storage can be provided to offset any loss in floodplain storage resulting from the development of this area.

4. Dedicated use of buildings for the infirm or elderly, or for essential emergency services, is prohibited within the north-eastern development area of the high density residential precinct.

5. Development is to comply with the floodplain management controls set out in Section 6.3.1 of Part 4.5 of the Ryde DCP 2010.

## 8.3 Wind Mitigation

Development is to comply with the Macquarie Park Wind Impact controls set out in Section 6.1.16 of Part 4.5 of the Ryde DCP 2010.

## 8.4 Air, Noise and Vibration

**Objectives**

a. Ensure that the siting and design of buildings minimises noise impacts from busy roads, rail corridors and other noise-generating land uses.

b. Ensure that commercial development does not unreasonably diminish the amenity of nearby residential uses and public spaces from noise intrusion.

c. Minimise the impacts of air pollutants from nearby busy roads and surrounding land uses.

**Controls**

1. The provisions of *State Environmental Planning Policy (Infrastructure) 2007* and *Development near Rail Corridors and Busy Roads Interim Guideline* must be taken into consideration to minimise impacts of busy roads and railway corridors on residential and other sensitive development such as child care centres and health services facilities.

2. An Acoustic Impact Assessment report prepared by a suitably qualified acoustic consultant is to be submitted with all development applications for commercial, retail and residential buildings, with the exception of applications for minor building alterations or where Council considers an assessment is not required.

3. Non-residential development is not to adversely affect the amenity of adjacent and nearby residential development and public spaces as a result of noise, hours of operation and/or service deliveries.

4. Noise from plant and equipment (including roof plant, air conditioning ducts and plant and servicing associated with green infrastructure) is to be attenuated to an appropriate level to ensure the amenity of adjacent and nearby uses is achieved and maintained.

5. Mechanical ventilation systems are to be designed to meet the requirements of the Building Code of Australia and relevant Australian Standards, and air intakes are to be sited as far as practicable from major sources of air pollution.

6. A vegetation buffer is to be established between the M2 Motorway and any residential buildings in the mixed use precinct prior to occupation. The vegetation buffer is to be of sufficient width to assist in intercepting wind-blown dust by physical entrapment of airborne particles.

## 8.5 Waste Management

Development is to comply with the Macquarie Park Waste Management controls set out in 6.3.3 of Part 4.5 of the Ryde DCP 2010.

## 8.6 Vegetation Management

**Objective**

a. Protect and enhance areas of significant native vegetation and riparian corridors.

**Controls**

1. Wherever practical, development within the Precinct should be sited to minimise impacts on existing vegetation and avoid removal of significant trees.
2. An arborist report for each Sub-Precinct is to be lodged with the first development application for road construction works and approved prior to the commencement of road construction works for that Sub-Precinct. The arborist report is to identify significant trees within the precinct and provide an assessment of whether the trees should be retained, removed or pruned, and protection measures during construction for trees to be retained.
3. A site specific Vegetation Management Plan (VMP) is to be prepared and implemented for the Northern Bushland Park. This plan is to be lodged with the first development application for road construction in the high density residential precinct and approved prior to the commencement of road construction works in this precinct.
4. The VMP is to be prepared in accordance with relevant guidelines and based on standard vegetation management actions including:
    a. Collection of seed from any native vegetation proposed to be cleared at the site;
    b. Weed control;
    c. Management of fire for conservation;
    d. Management of human disturbance;
    e. Retention of regrowth and remnant native vegetation;
    f. Replanting or supplementary planting where natural regeneration will not be sufficient;
    g. Retention of dead timber;
    h. Erosion control; and
    i. Retention of rocks.
5. The VMP is to ensure the rehabilitation and regeneration of the Porters Creek vegetated riparian corridor (being 30 metres wide on either side of the creek measured from top of bank), taking into account Council's priority creek rehabilitation works.

6. The VMP is to provide for a minimum 2 year monitoring and maintenance period for the rehabilitated riparian area and other revegetation following final planting.

7. A 30m buffer is to be provided from the top of the nearest bank of Porters Creek to any future development.

## 8.7 Soil Management

Development is to comply with the Macquarie Park Soil Management controls set out in 6.3.4 of Part 4.5 of the Ryde DCP 2010.

## 8.8 Site Contamination

Development is to comply with the Macquarie Park Site Contamination controls set out in 6.3.5 of Part 4.5 of the Ryde DCP 2010.

## 8.9 Heritage and Archaeology

**Objective**

a. Ensure appropriate protection and management of European and Aboriginal heritage within the Precinct.

**Controls**

1. Development applications for buildings in the high density residential precinct to the east of the Spine Road adjacent to the M2 Corridor are to be accompanied by a visual impact assessment which considers the visual impact of the development on the heritage significance of the Macquarie Park Cemetery and Crematorium. Council may waive this requirement for a visual impact assessment if it considers that the proposed development is low scale and will not result in significant adverse visual impacts.

2. Where works are proposed in the vicinity of the bricked domed well or cistern located within the mixed use precinct (as identified in Figure 16 of the *North Ryde Station Precinct Rezoning Study - Aboriginal Heritage Assessment and Non-Indigenous Archaeological Assessment* (Artefact Heritage, November 2012)), a report is to be provided detailing the arrangements for the archaeological monitoring of the cistern. These should include that:
    a. When the well/cistern is located during construction excavation works, all works within 15m of the well/cistern are to cease immediately and a heritage/archaeological consultant is to be engaged;
    b. The archaeological consultant is to prepare a report on the condition of the item and its significance. This heritage assessment is to be submitted to Council and a site visit undertaken by Council; and
    c. Once Council is satisfied the appropriate research works and methodology have been prepared, written approval is to be issued by Council prior to any works commencing within this 15m restricted zone.

3. Protective fencing is to be installed at the 15 m perimeter setback from the well/cistern whilst the investigation works are being undertaken.